

CALIFORNIA COASTAL COMMISSION

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Commission Action:

**STAFF REPORT: REGULAR CALENDAR**

APPLICATION NUMBER: 5-05-020 (Brightwater)

APPLICANT: Hearthside Homes/Signal Landmark

AGENT: Ed Mountford, Dave Neish, Donna Andrews, Susan Hori

PROJECT LOCATION: 17201 Bolsa Chica Road, Bolsa Chica, Orange County

PROJECT DESCRIPTION: Approval of Vesting Tentative Tract Map (VTTM) 15460 for the subdivision and development of two existing parcels into the 105.3-acre Brightwater community consisting of 349- residential lots on 67.9 acres and 37.4-acres of habitat restoration and public trail, located primarily on the upper bench of the Bolsa Chica Mesa. The proposed project also includes the construction of 349 single-family homes and the construction of two small local parks within the residential community. The 37.4-acre habitat area consists of a 34.2-acre coastal sage scrub and native grassland community located along the western and southern slope and bluff top edges slope and bluff face areas and the construction of a 3.2-acre Los Patos Wetland and Southern Tarplant preserve . The coastal sage scrub and native grassland restoration area also serves as a buffer between the proposed development and the existing "Eucalyptus tree" environmentally sensitive habitat area (ESHA). Three proposed vertical walkways providing resident access to the habitat trail will also be available to the public. Approved VTTM 15460 also includes the creation of an 11.8-acre residual parcel located on the lower bench of the Bolsa Chica Mesa.

440,000 cubic yards of grading (220,000 c.y. cut, 220,000 c.y. fill) is proposed to carry out the proposed project. Infrastructure improvements include the construction of a 1.2-million gallon underground drinking water reservoir and aboveground pump station and a new 54" to 66" storm drain and rip-rap energy dissipater discharging treated runoff to the off-site Isolated Pocket Lowland area. Public access, including pedestrian, bicycle and vehicular access and public parking will be allowed throughout the community. The Los Patos Avenue frontage will also be widened, paved and landscaped creating 114 (unstriped) public parking spaces.

LOCAL APPROVALS RECEIVED:

SUBSTANTIVE FILE DOCUMENTS:

SUMMARY OF STAFF RECOMMENDATION:

The Brightwater development project, as proposed, raises issues concerning protection of environmentally sensitive habitat areas (ESHA) and important raptor foraging habitat adjacent to one of the three on-site ESHAs; protection of marine resources and the protection of cultural resources. The proposed project would also create a new irregularly shaped 11.8-ac separate legal parcel on the lower bench of the Bolsa Chica Mesa that, if developed, would cause significant impacts to Warner Pond wetland for an access road and significant impacts to a large population of Southern Tarplant in developing the parcel and that raises concerns of geologic safety with the Fault Zone of the Newport-Inglewood Fault running through a portion of the proposed new lot. The primary outstanding issues are: 1) significantly inadequate Eucalyptus tree ESHA buffer; 2) fuel modification throughout the already undersized Eucalyptus Grove ESHA buffer in order to protect the proposed adjacent residential development; 3) elimination of 68 acres of raptor foraging habitat without mitigation for the lost habitat; 4) inadequate Burrowing Owl ESHA buffer; 5) encroachment into the undersized Burrowing Owl ESHA buffer with residential lots, grading to support residential development and for residential fire protection purposes; 6) inadequate mitigation of impacts to ORA-83, an important archaeological site that has twice been found eligible by the California State Historic Resources Commission for listing as a State, as well as a National Historic Site; and 7) inadequate water quality management plan provisions. Staff recommends **approval** of the proposed project with special conditions necessary to bring the project into conformance with the coastal resources protection policies of the Coastal Act.

The special conditions proposed by staff would require that 1) an open space restriction be placed on the habitat areas; 2) an offer to dedicate the proposed Coastal Sage Scrub and Native Grassland Creation habitat and Southern Tarplant and Seasonal Pond Environmental Protection Area be recorded; 3) a trail easement be offered over the public trail and over the portion of the grassland habitat area that will be subject to approved fuel modification; 4) a public access and habitat management program be developed and funding be identified to carry out these activities; 5) the applicant abide by the California Burrowing Owl Consortium guidelines for avoiding and mitigating impacts to burrowing owls during construction; 6) the CC&R's of the subdivision reflect certain requirements, primarily dealing with public access and habitat protection conditions; 7) construction and development phasing be carried out in a manner that is protective of the biological resources and assures that the public access and recreation are prioritized; 8) erosion control measures are in place to prevent impacts to the marine environment; 9) the fencing off of habitat areas and the identification of construction staging areas that will not

adversely impact sensitive resources; 10) the preparation of a final habitat management plan with appropriately sized, planted and managed ESHA buffers, controls activities within those buffers, and the addition of the Southern Tarplant and Seasonal Pond Environmental Protection Area into the Plan; 11) native and non-native, non-invasive appropriate landscaping throughout the project area; 12) fuel modification within the ESHA buffer areas be regulated; 13) lighting be directed away from habitat buffer areas; 14) certain requirements relating to walls, fences, gates, safety devices and other habitat barriers be followed; 15) all subdivision streets, sidewalks, parking and trails and parks be open to the general public; 16) additional requirements on the proposed water quality management plan be observed; 17) a revised tentative tract map eliminating the proposed residual parcel on the lower bench, and revised plans showing the enlargement of the Eucalyptus Tree and Burrowing Owl ESHA buffers, public access signage and cultural resources interpretive plan along the habitat trail, revised stormdrain plan, and off-site raptor foraging habitat plans be submitted; 18) additional slope stability analysis for the revised grading plan be performed and the developer conform development plans to geotechnical recommendations; 19) the developer assume the risks of development; 20) the developer treat the exterior appearance of structures visible from the public areas; 21) the height of the structures abutting and visible from the public trails be kept to no more than 31.5 feet, as proposed; 22) procedures for the review and approval of future development be followed; 23) requirements and procedures established herein to be followed regarding the possible discovery of additional archaeological resources during grading; 24) the reports required to be prepared in conjunction with the research, investigation and salvage of ORA-83 and curation of the artifacts recovered from the archaeological site be disseminated; 25) the applicant obtain all other necessary agency approvals; 26) the applicant perform work in strict compliance with all of the special conditions of this permit and 27) applicant be informed of the Commission staff's right to inspect the site.

EXECUTIVE SUMMARY

Hearthside Homes has submitted and withdrawn two previous coastal development permit applications for development of the upper bench of the Bolsa Chica Mesa. On November 6, 2002 coastal development permit application 5-02-375 was submitted, but it was eventually withdrawn by the applicant (in May of 2004) prior to the preparation of a written staff recommendation and Commission public hearing. On May 21, 2004 the property owner submitted application 5-04-192. Commission staff prepared a staff report with a recommendation of denial of the project as it was designed citing significant inconsistencies with Coastal Act provisions regarding public access and public recreation opportunities, especially lower cost visitor and recreational facilities; the protection and enhancement of marine water quality; protection of environmentally sensitive habitat areas (ESHA) and other important land resources and the allowance of only resource dependent uses in ESHA and the requirement for adequate buffers between ESHA and development areas; the protection of archaeological and cultural resources; and the protection of scenic coastal resources to and along the coast by minimizing the alteration of natural landforms.

The Commission held a public hearing on application 5-04-192 on October 13, 2004 in San Diego. Following Commission discussion of the project the applicant withdrew the application. The Commission waived the six-month waiting period at the applicant's request, allowing immediate reapplication for the development of the site. Following the October public hearing the applicant and staff had several meetings including a meeting on-site with planning and technical staff where the applicant's proposed setback areas were staked allowing a better perspective of the relationship of the proposed development to the habitat areas. On January 21, 2005 Hearthside Homes submitted the subject coastal development permit application 5-05-020 after making several modifications to the previous project design. The basic elements of the Brightwater Development project have not changed. The proposal still includes the subdivision of 2 lots into a single-family residential community and a passive public park/habitat restoration area along the western top-of-slope and gentle slope area and the southern bluff top edge and bluff face of the upper bench. Although these basic elements have not changed, the applicant has made several changes to the project aimed at addressing the Coastal Act inconsistencies of the project as voiced by the staff and by the Commission. Some of the changes are significant, bringing certain aspects of the project into conformance with the Coastal Act, if they are implemented. Other changes partially address the project's inconsistency with certain aspects of the Coastal Act but do not bring the project into conformance with applicable Coastal Act provisions while some aspects have not been modified at all and remain inconsistent with the Coastal Act. Staff recommends approval of this new proposal with special conditions to bring the proposed project into conformance with the Coastal Act in the remaining areas. The discussion below compares the October 2004 project with the current, January 2005 project.

The previously proposed guard-gated, private residential community will now be open to general public vehicular access, also allowing public parking on all subdivision streets. Under the two previous applications public vehicular and pedestrian access was prohibited into the community, but under application 5-04-192 the applicant agreed to allow pedestrian access through the guard gates and added a new pedestrian gate through the center of the site in response to staff comments that the prohibition on public vehicular access and allowance for pedestrian access only at either end of the 105 acre site did not maximize public access. All residential units will have at least two on-site enclosed parking spaces and some units will have three and four spaces. Therefore, the on-street parking should be adequate for residential guests and visitors to the habitat park and trail. One hundred fourteen additional on-street parking spaces are also being provided along Los Patos Avenue. However, the public pedestrian trail is no longer being proposed through the center of the site since the public can now park on any of the residential streets to gain access to the habitat park and trail. With these changes to the project, and as conditioned to assure that the public trail is adequately signed informing the public of its availability, that on-street parking remains publicly accessible and that the trail and benches are constructed in the early phases of the development and properly maintained, the proposed project is consistent with the public access and public recreation policies of the Coastal Act.

Another significant change that has occurred with the current project design is the elimination of the previously proposed “restoration” grading consisting of a 30 ft. high, 2 acre fill area at the southern bluff edge. The fill would have been within the Eucalyptus tree ESHA buffer area, and would have also resulted in significant landform alteration and visual impacts. With the elimination of this fill the proposed project minimizes landform alteration, and as conditioned to soften the visual impacts of the development through landscaping and exterior wall and building color compatibility, the proposed project no longer raises issues of conformance with the Coastal Act provisions protecting visual resources.

The previous project raised significant issues of consistency with the Coastal Act provisions calling for the protection of biological resources. The Brightwater development site contains three environmentally sensitive habitat areas (ESHA) as defined by Section 30107.5 of the Coastal Act – the approximately 5-acres Eucalyptus trees located primarily along the southern bluff face, the Burrowing Owl habitat within the central bluff area and the Southern Tarplant near the Los Patos wetland (Exhibit 20, Fig. 1). The two previous applications did not recognize or protect in place the Southern Tarplant ESHA populations or the Burrowing Owl ESHA habitat. The applicant initially proposed to translocate all tarplant to the lower bench to make way for residential, private recreation, water quality wetlands and public trail development. Subsequently, the applicant eliminated the lower bench translocation plan and instead proposed to translocate the tarplant to other upper bench nearby populations or immediately adjacent to its present location. Both the Los Patos wetland and the Southern Tarplant ESHA were located within the proposed 2.5-ac private recreational facility. For the tarplant found near the Los Patos wetland but further than 100 feet away from the wetland, the applicant proposed to relocate the tarplant to within 100 ft. of the wetland so that all of the tarplant would be within the 100 ft. wetland buffer. Additionally, the applicant was proposing a decomposed granite maintenance road and an elevated boardwalk for wetland viewing within the wetland and tarplant buffers. Finally, there was additional encroachment into the Los Patos wetland buffer and direct impacts to the Southern Tarplant ESHA adjacent to the wetland due to the construction of the then proposed 2 million gallon underground water reservoir. The tarplant translocation as well as the recreational and water storage facility encroachments into the wetland and tarplant buffers are activities that are inconsistent with Sections 30240 and 30233 of the Coastal Act.

In the current Brightwater development proposal the applicant has eliminated the Southern Tarplant translocation plan and is protecting the Southern Tarplant ESHA in place with the staff recommended 50-foot wide buffer. Additionally, the project no longer includes the private recreational facility that surrounded and significantly impacted the wetland and Tarplant ESHA, and the underground water reservoir has been redesigned such that there will be no encroachment into the habitat or habitat buffer except for a one time encroachment into the buffers in order to construct the proposed 1.2 million gallon underground water reservoir. The area of the previously proposed 2.5-acre private recreation center is now proposed as a fenced 3.2 acre “Southern Tarplant and Seasonal Pond Environmental Protection Area.” As conditioned, to provide proper buffers for the

wetlands and Tarplant ESHA and to provide for monitoring and on-going maintenance and the preservation of this habitat area in perpetuity, the proposed project is consistent with Sections 30240 and 30233 with regards to the Southern Tarplant of the upper bench and the Los Patos seasonal wetland.

Under the previous application the proposed water quality treatment plan included a vegetated treatment system with a series of five cleansing wetlands and a 1.3-acre detention basin located on the slope separating the upper and lower benches. Several of the created wetlands would have impacted Southern Tarplant and the proposed detention basin was to be located within the Burrowing Owl ESHA. The applicant is now proposing to eliminate these features and is now proposing to provide a stormwater filtration system within the residential development area. The stormwater would then be discharged through a new 54" to 66" buried pipe to be constructed at the location of an existing oil pipeline that goes through an area between the Eucalyptus Grove ESHA discharge to the Isolated Pocket Lowland. Commission staff ecologist, Dr. John Dixon, recommends that the alignment of the proposed stormdrain can be found consistent Section 30240 of the Coastal Act based on the site-specific unique nature of the Eucalyptus ESHA on the Bolsa Chica Mesa where it is only the non-native Eucalyptus trees that constitute the ESHA, as detailed in Dr. Dixon's memo (Exhibit 20, pages 2-5).

The proposed 66" outlet contains an internal energy-dissipating collar and a rip-rap apron or other energy dissipater will be constructed below the outlet, on an existing dirt road. The State Lands Commission, owner of the pocket lowland area has consented to this new stormdrain and discharge plan. They have also evaluated the potential impacts on the to-be-restored muted tidal wetland and found them to be insignificant. The Commission also notes that the use of the existing 24 inch stormdrain would have required a much more extensive use of rip-rap or the extension of the existing stormdrain or the combination of the two, for approximately 200 feet, since the 24" pipe stops at mid bluff and does not extend down to the pocket lowlands as will the proposed 66" stormdrain. Further, there is a Eucalyptus tree at the immediate downslope discharge point of the existing 24" stormdrain, calling into question whether it can be used for runoff control purposes for the proposed residential development in a manner that is consistent with Section 30240 of the Coastal Act. The proposed 66" stormdrain does not raise this issue as it is located in an area that does not contain any Eucalyptus, palm or pine trees, all of which are used by the numerous raptors that use the site.

While this aspect of the project can be found consistent with the marine resources protection policies of the Coastal Act, other provisions of the water quality management program are not adequate as proposed. The project is therefore conditioned to bring it into conformance with the applicable marine protection provisions of the Coastal Act.

The applicant has also made other changes to the project that do not go far enough to bring the project into conformance with the protection of the other two environmentally sensitive habitat areas of the project site. The applicant did not previously, and still does not agree with the ESHA determination for the Burrowing Owl habitat and contends that

the Burrowing Owl does not reside on the project site, but only winters on-site. The burrowing owl (*Athene cunicularia*) is a California Species of Special Concern (CSC), as designated by the California Department of Fish and Game. This bird hunts for prey over open areas and grasslands and typically nests in the abandoned burrows of rodents. Evidence of burrowing owl use of the site was documented in 2001-2002 and 2002-2003 and denoted "burrowing owl use area" by the applicant's biologist. The applicant objected to Commission staff ecologist's designation of the applicant's "burrowing owl use area" as ESHA. The applicant's consultant countered that the Commission should use the actual burrows used by the owls rather than all of the nearby potential habitat and provided staff with a polygon created by connecting those burrows with straight lines. In their revised map of the owl use area, the applicant's consultant, LSA, omitted one burrow where an owl was seen once but then abandoned. Staff accepts this smaller "burrowing owl use area" as the Burrowing Owl ESHA boundary after going out in the field with the biologists who conducted the original surveys and a review of the information submitted subsequent to the October 2004 hearing (Exhibit 17b). Although there is merit in accepting the applicant's reduced Burrowing Owl ESHA delineation as proposed, there is no justification for the proposed reduction in the Burrowing Owl ESHA buffer or the grading within the buffer. Staff continues to recommend a 164 ft. (50 meter) buffer and the applicant is proposing a buffer of only 100 feet with an additional 50 ft. wide permanently irrigated area immediately adjacent to the residential lots¹. Further, the proposed project also includes grading within the 50 foot area closest to the residential lots in order to create the residential pads. As conditioned, the applicant must also abide by the "Burrowing Owl Survey Protocol and Mitigation Guidelines" by California Burrowing Owl Consortium to determine if there is any occupation of the burrows of the Burrowing Owl ESHA. Only as conditioned to submit revised plans for a 164 ft. wide Burrowing Owl buffer, elimination residential grading in the Burrowing Owl buffer, and planting and maintaining of the buffer for habitat purposes consistent with the approved fuel modification and habitat management plans can the project be found consistent with Section 30240(b) of the Coastal Act with regards to the provision of an adequate buffer to protect the Burrowing Owl ESHA.

Another area in which the applicant has made insufficient changes is the size of the Eucalyptus Tree ESHA buffer and encroachments into it for fuel modification purposes. In the previous applications the Eucalyptus tree ESHA buffer was proposed at 100 ft. in width, as measured from the edge of the Eucalyptus grove ESHA. This is less than half the width of the staff-recommended 328-foot (100-meter) Eucalyptus tree ESHA buffer. In addition to the grossly undersized buffer the applicant previously proposed several significant encroachments into the buffer and into the ESHA itself. Due to the proximity of the future homes along the southern bluff edge to the Eucalyptus trees, under the applicant's proposal the entire 100 ft. wide buffer would also double as the Orange County

¹ The Initial January 21, 2005 application proposed a 150 ft. buffer between the Burrowing Owl ESHA and the residential lots. This is already 14 ft smaller than the staff recommended 164 ft. (50 meter) Burrowing Owl ESHA buffer. Then on March 11, 2005 the applicant informed staff that the Orange County Fire Authority wanted the 50 ft. closest to the homes permanently irrigated for fire protection purposes. The applicant then requested that staff not consider the 50 ft. area closest to the home as habitat buffer but as "ecotone area" as a transition between the habitat and the residential area (Exhibit 4).

Fire Authority (OCFA) required Fuel Modification area. Not only did Fuel Modification Zone D include the entire habitat buffer, it also overlapped the Eucalyptus Grove ESHA itself. In order to protect sixteen of the homes closest to the trees, the entire ESHA buffer was required to be permanently irrigated and its plant palette strictly controlled for fire suppression purposes instead of being planted and minimally managed to protect the ESHA from adjacent proposed urban uses (Exhibit 14). Additionally, there was encroachment into the actual Eucalyptus grove ESHA for initial and continued modification of the understory of the Eucalyptus Grove ESHA affecting approximately 0.8 acres of the existing five-acre grove. In addition to the use of the entire habitat buffer for required Fuel Modification, additional encroachments into the reduced Eucalyptus Grove ESHA buffer under the October 2004 project included: (1) approximately 600 linear feet of the proposed 12 ft. wide paved, all-weather, pedestrian/bicycle trail; (2) significant grading activity (including a 30 ft. high fill slope, two acres in size); (3) five of 30 proposed public parking spaces; and (4) approximately 250 ft. of the 32 ft. wide paved extension of Bolsa Chica Street.

Under the current application a public trail is still being proposed to allow bird watching and scenic views of the wetlands and Pacific Ocean but the trail has been reduced to 6 ft. in width, will have a decomposed granite surface and will be relocated closer to the residential lots. The 2-acre, 30 ft. high fill ("restoration") slope has also been eliminated as well as the public parking that was proposed atop the fill and the extension of Bolsa Chica Street. The southern bluff face area will now be left in open space as part of the Eucalyptus grove ESHA buffer with the elimination of the proposed fill slope.

As measured from the landward edge of the Eucalyptus tree ESHA, the applicant is now proposing a Eucalyptus ESHA buffer that varies from 150 ft. (46 meters) in the western portion to 382 ft. (116 meters) in the eastern portion of the buffer, with the average width being 274 ft. (84 meters). Staff notes that where the Eucalyptus grove ESHA buffer would be the widest is where there is a fairly steep slope separating the trees from the bluff top development area. In that area the proposed residential lots are set back 100 ft. from the bluff edge. Therefore the majority of this wider ESHA buffer is vertical slope area and not horizontal distance at the same elevation of the proposed residential development. The horizontal buffer distance (between the proposed lots and the bluff edge) is 100 ft. Further, the Commission notes that the raptors generally use the upper portion of the trees for nesting, roosting and perching. Therefore it is the distance - in a straight line - between the development and the tops of the trees that is important. Staff is continuing to recommend that the Eucalyptus Tree ESHA buffer be no less than 328 feet (100 meters) in width, measured from the landward-most trees, for the entire length of the Eucalyptus ESHA and that no residential support development be allowed in the buffer, in order to adequately protect the viability of the trees that have been designated ESHA under the Coastal Act by the Department of Fish and Game and recognized as such by the courts as well as the Coastal Commission. In order to be found consistent with the Coastal Act provisions regarding the protection of environmentally sensitive habitat areas the Eucalyptus Tree ESHA buffer must be sufficiently sized to protect the raptors that use the trees. For the reasons detailed in Section D of this report, only as conditioned to increase

the size of the buffer to 328 feet (100 meters) can the proposed project be found consistent with the Coastal Act regarding this resource. There is a gap through the Eucalyptus tree ESHA where there is an existing oil pipeline. The applicant is proposing to use that same alignment to construct the proposed new 54" to 66" storm drain. The proposed project is conditioned to avoid grading within 500 feet of the Eucalyptus Tree ESHA during the breeding season if raptors are present. The proposed project is also conditioned to employ erosion control and water quality BMPs during grading and construction., as conditioned, the proposed project can be found consistent with Section 30240 of the Coastal Act.

Under the October 2004 Brightwater project proposal, residential development covered all of the area that was formerly occupied by the significant archaeological site, ORA-83, known as the Cogged Stone Site. Although the applicant has carried out a comprehensive data recovery program through coastal development permits issued by the Coastal Commission beginning more than 20 years ago, there is still merit under the Coastal Act for further mitigation of the significant archaeological resources of ORA-83. ORA-83 has twice been recognized by the State Historical Resources Commission as being eligible for listing on both the State and National Register of Historical Places. The applicant states that under the current application , unlike the 2004 proposal, a significant portion of the area previously occupied by ORA-83 will be preserved in open space and accessible to the public. However, this mitigation is inadequate in meeting the requirements of Section 30244 of the Coastal Act. The applicant proposes no interpretive signage or displays along the trails acknowledging the importance of the site to prehistoric and historic Californians and informing the public of ORA-83, nor the curation or dissemination of the wealth of data and artifacts that have been recovered from the site in over 20 years of investigation. Finally, there is still the possibility that additional cultural resources may be discovered when grading commences on relatively undisturbed portions of the site. Only as conditioned to provide for the protection of any further discoveries of significant cultural deposits, to provide for appropriate interpretive signage concerning the cultural heritage of the site, to agree to donate the recovered artifacts to an appropriate curation facility in Orange County and to disseminate the series of final reports that were required to be prepared and to have an archaeologist and Native American monitor present during further grading activities is the proposed project consistent with Section 30244 of the Coastal Act. Further, the Commission notes that a significant portion of ORA-83 is within the staff recommended 328 foot Eucalyptus Tree ESHA buffer. Therefore, if the full habitat buffer is required, the majority of ORA-83 will also remain in an undeveloped state, which is the desirable disposition of this area as stated by most of the Native Americans, archaeologists, anthropologists, astronomers and environmentalists who have written to the Commission concerning the 2004 application regarding the preservation of the cultural resources of the site and in the current application (Exhibits 18, 19, 22-24). The issue of archaeoastronomy and its importance has also been raised at the Brightwater site in both the 2004 and current application. Although there is dispute among the applicant's archaeologist and Ms. Jeffredo-Warden as to whether the Brightwater site possesses significance in this area, if ORA-83 is preserved in open space, the opportunity for these observations, if they are available from the project site, are also preserved.

Finally, there are two issue areas in which the applicant has made no changes. Namely, the applicant still refuses to include the 103 acres² they own on the lower bench of the Bolsa Chica Mesa in this current application, and there is no mitigation proposed for the significant loss of raptor foraging habitat that the project would cause on the upper bench. In all of the Commission's previous consideration of the Bolsa Chica Mesa, beginning with the first LCP action in the mid 1980's, both the upper and lower benches of the Bolsa Chica Mesa as well as the Bolsa Chica Lowlands, have been before the Commission. Beginning with the applicant's first coastal development permit application for the proposed Brightwater development in November 2002 the applicant has not included its 103-acre ownership on the lower bench. The lower bench is a critical part of the Bolsa Chica ecosystem, and thus it is critical that the lower bench be included in the assessment of project impacts on the ecosystem. Despite numerous staff requests that the applicant include its lower bench holdings in the application for development of the upper bench and the slope between the upper and lower benches, the applicant has refused to do so, with the exception of the 11.8-acre portion of the existing Parcel 2, which lies primarily on the upper bench. The applicant is requesting that the Commission split off the lower bench portion of Parcel 2, making it a separate legal parcel. The applicant refuses to include its lower bench ownership in the current application because they wish to sell it to the Wildlife Conservation Board and in August 2004 entered into an agreement to sell it for \$65 million.

The applicant stated in a September 13, 2004 letter to staff that Hearthside Homes does not wish to include their lower bench holdings in the coastal development permit application because, "[a]mending our application to include the Lower Bench would expose Hearthside to the possibility of a Commission decision imposing a conservation easement and jeopardize the agreement between Signal Landmark and WCB" (Exhibit 6a). The applicant made the assumption about the imposition of a conservation easement over the lower bench based on the Commission's 2000 LCP suggested modification to do so in conjunction with allowing development on the upper bench with a reduced 100 ft. setback from the bluff edge, as explained in Section C of this staff report. If the applicant were to include the lower bench area in the application and the Commission indeed imposed a conservation easement over it, as staff would recommend, the applicant may not get \$65 million for the sale of the land, as the purchase price in the existing purchase-sale agreement is at market rate, based on the value of residential development not based on a more restrictive conservation land use. Because the applicant has refused to include the lower bench in the subject application, thereby preventing the Commission from assuring that it will be restricted to conservation land uses, the Commission cannot allow a reduced setback for development on the upper bench, as the applicant continues to propose. As conditioned, the applicant must submit a revised tentative tract map showing that the 11.8 portion of Parcel 2 that lies on the lower bench be connected to an adjacent parcel that will remain with the proposed VTTM 15460 that is before the Commission.

² The 103 acres of land on the lower bench owned by the applicant includes the 11.8-acre remnant portion of Parcel 2 that would be left over under VTTM 15460.. The majority of Parcel 2 is located on the upper bench (Exhibit 5). Therefore, the applicant has included in this application a proposal for development on 11.8 acres of the 103 acres of their lower bench ownership, through their request to create a separate legal parcel of this 11.8 land.

Seventy-five acres of raptor foraging habitat, the non-native annual grassland and ruderal vegetation that covers the majority of the project site, was being eliminated without mitigation under the previous application. The current application reduces the development footprint by approximately 9 acres and thus results in a reduction in the amount of annual grassland//ruderal vegetation being eliminated. Although the impact area has been reduced to 68 acres, this loss is a significant unmitigated loss of important habitat. Dr. John Dixon, Commission staff ecologist asserts that the Eucalyptus Trees would cease to function as ESHA were there not adequate foraging habitat nearby because many of the raptors that use the Eucalyptus trees for hunting perches and roosting or nesting sites forage in the wetlands, the coastal sage scrub along the bluff edge and the mesa grasslands being impacted by the proposed project. While not considered an environmentally sensitive habitat area within the meaning of Section 30107.5 of the Coastal Act, the non-native annual grassland and ruderal vegetation that covers the majority of the 105.3-acre project site is important foraging habitat for many species of raptors, including white-tailed kites (a Fully Protected Species), and several California Species of Special Concern (CSC) such as the northern harriers and burrowing owls. This vegetation is also considered significant because it represents one of the last significant grasslands adjacent to a coastal wetland, making it an integral part of the wetland/upland ecosystem. Because of the importance of the non-native annual grassland/ruderal vegetation, the Department of Fish and Game recommended mitigation for the loss of this habitat at the project site at a ratio of 0.5 acres of preservation to 1.0 acres of loss. Following this recommendation the applicant should provide 34 acres of preserved grasslands. Although the applicant is not proposing to mitigate the loss of raptor foraging habitat, the Eucalyptus Tree and Burrowing Owl ESHA buffers can be used to partially mitigate this loss since the applicant is planning to restore this area partially with native grassland. However, the applicant's proposed buffer falls far short of the 34 acres needed to mitigate the loss of the non-native grassland. With the varying width 150 to 382 ft. (counting the permanently irrigated area) and counting even the non-grassland habitat, the applicant would have less than 30 acres. The Department of Fish and Game has stated that they would not give the applicant credit for non-grassland habitat and no credit will be given for any areas that are subject to any fuel modification. As conditioned to widened these buffers and remove the restriction on the plant palette from all but the first 50 feet of the buffer closest to the homes, to plant the majority of the remainder of the buffer in native grassland species and to provide the remainder off-site of the 34 acres of native or annual grassland that cannot be provided on-site, consistent with the final approved final habitat management plan, the proposed project is consistent with the Coastal Act concerning the protection of raptor foraging habitat.

Areas of Remaining Major Controversy

- **Inadequate Buffer Between Eucalyptus Tree ESHA and Adjacent Development.** The trees of the Eucalyptus Grove are used as nesting, roosting, and perching sites by many species of raptors, including white-tailed kites, red-tailed hawks, and great horned owls. Adequate buffers between habitat areas

and development are essential in maintaining the viability of habitat areas. In order to provide adjacent foraging habitat and to prevent disturbance to nesting areas, staff continues to recommend a 328 foot (100-meter) buffer between the Eucalyptus Grove ESHA and the adjacent development. If grading occurs when raptors are nesting, an even larger buffer of 500 ft. (152 meters) should be provided around the nest during construction activities, as detailed in Section D, Biological Resources, of this staff report. The currently proposed Brightwater development project provides a varying width Eucalyptus Grove buffer ranging from 100 to 332 feet between the most landward trees and the proposed residential lots. However, the Commission notes that where the buffer is widest is at the easternmost portion of the site. There the majority of the Eucalyptus trees are located further down the fairly steep bluff face and the distance between the trees and the proposed residential lots represents a significant vertical distance. In this area the residential lots are set back only 100 ft. from the bluff edge but the lot is setback up to 382 feet from the northernmost Eucalyptus tree in one instance. Further, it must be remembered that it is the tops of the trees that are used by the raptors for nesting, roosting and perching. The distance from the tree-tops to the residential lots is much closer to 100 than to 332 ft.

- **The Eucalyptus Tree ESHA Buffer Further Reduced by Fuel Modification Requirements.** As stated above, the proposed Eucalyptus Tree ESHA buffer at 100 to 332 ft. in width is inadequate to protect the raptors from adjacent development and should be a minimum of 328 ft. (100 meters). When the current application was submitted on January 21, 2005 the proposed Eucalyptus ESHA buffer was proposed at 150 to 382 ft. in width. The applicant revised the buffer due to the concerns of Orange County Fire Authority (OCFA). Because OCFA is now requiring that the 50 ft. nearest the homes be permanently irrigated the applicant has removed this area from the habitat buffer (Exhibit 4). Although the applicant has been working with OCFA for months they do not have conceptual approval of their fire management program to date. An area that is permanently irrigated, containing a controlled plant palette and mowed, thinned, and pruned to protect adjacent development from fire damage is not planted or managed to protect the adjacent ESHA from disruption of its habitat value as required by Section 30240(b) of the Coastal Act. Therefore if these activities were to occur in the already inadequately sized Eucalyptus ESHA buffer the proposed project would be further inconsistent with the Coastal Act. The Commission notes that under the previous October 2004 project, OCFA still required the typical fuel modification activities, as well as the requirement of 100 ft. of permanent irrigation in addition to the normal requirement of 70 ft. of irrigated area between combustible structures and certain vegetation due to the presence of the Eucalyptus grove. These fuel modification requirements were imposed despite the fact that the applicant was also proposing to plant the area with native coastal prairie and coastal bluff scrub as well as provide other significant fire management mitigating features within the fuel modification area

such as: a 12-ft wide paved all weather road with three 30 ft. wide paved access points (paseos) that was to also serve as a fire access road; a paved 30-space parking lot to also serve as a fuel break; a water feature within the fuel modification area with the construction of the series of 5 created wetlands and 1.3-acre detention basin; Class A construction of all roofs and the sprinklering of the 16 homes that were adjacent to the area where Fuel Modification Zone D encroached into the Eucalyptus grove. Therefore the Commission is not at all assured that OFCA will not require some or all the typical mowing, pruning, and thinning of ESHA buffer area along with already controlling the plant palette to only certain very low growing natives.

- With regards to the currently proposed Brightwater project, it is the opinion of the Commission's staff ecologist that limited fuel modification within a limited portion of the ESHA buffer, if it were first widened to be sufficiently protective, could be allowed consistent with Section 30240 of the Coastal Act. If the Eucalyptus ESHA buffer is widened to 328 feet (100 meters) the applicant's proposed restricted plant palette and permanent irrigation could be allowed only within the first 50 feet nearest the proposed residential lots. This area is called Zone B Ecotone Management area on the applicant's "Conceptual Plan Plant Palette for Open Space and ESHA Buffer" (Exhibit 4). Temporary (3-5 years), above ground irrigation could be allowed throughout the buffer for plant establishment. Mowing could also be allowed within the buffer in the 50 feet nearest the residential lots. The 50 foot wide area south of Zone B may also be mowed, if necessary but the plant palette would need to be unrestricted and must contain species appropriate to a native California grassland community in coastal Southern California. No other fuel modification practices would be allowed within the ESHA buffer.
- **Elimination of 68 Acres of Raptor Foraging Habitat Without Mitigation.** The 105.3-acre project site is primarily vegetated with annual grasslands and ruderal vegetation along with several environmentally sensitive habitat areas. Although annual grassland/ruderal vegetation type is non-native, it nevertheless provides foraging habitat for many species of raptors, including white-tailed kites (a Fully Protected Species) and several California Species of Special Concern (CSC) such as northern harriers and the burrowing owls. The loss of this vegetation is also considered significant because it represents one of the last significant grasslands adjacent to a coastal wetland, making it an integral part of the wetland/upland ecosystem. The project as proposed and approved by the County of Orange provides no mitigation for this significant adverse impact. The Department of Fish and Game, in its comments on the project EIR recommended that the loss of annual grassland/ruderal vegetation be mitigated by preserving 0.5 acres of foraging habitat for each acre lost. Therefore 33.9 acres of habitat would need to be preserved. The proposed native grassland creation can be used to provide partial mitigation. However, with the applicant's proposed ESHA buffers the grassland area falls far short of this amount. Even

counting the other habitat communities, including 0.41 acres of freshwater wetlands, the applicant would have less than 30 acres. Off-site opportunities for raptor foraging habitat mitigation however do exist.

Inadequate Burrowing Owl ESHA Buffer. The burrowing owl (*Athene cunicularia*) is a California Species of Special Concern (CSC), as designated by the California Department of Fish and Game. This bird hunts for prey over open areas and grasslands and typically nests in the abandoned burrows of rodents. Evidence of burrowing owl use of the site was documented in 2001-2002 and 2002-2003 and denoted "burrowing owl use area" by the applicant's biologist. Further, a raptor biologist with extensive knowledge of the Bolsa Chica Mesa has opined that wintering burrowing owls use the Bolsa Chica Mesa during most years. It is the opinion of the applicant that the bird does not reside on the project site, but only winters there. It is the opinion of the Commission's staff ecologist that the burrowing owl habitat on the upper bench constitutes an environmentally sensitive habitat area (ESHA) under the Coastal Act and therefore must be avoided. The applicant has revised their "burrowing owl use area" to exclude the ground squirrel burrows that were not observed being used by the owls citing that there are numerous nearby potential burrows without evidence of actual bird use. The applicant's revised "burrowing owl use area" omits one burrow, located in the slope of the vegetated gravel stockpile area, where the owl was seen once but vacated in favor of one of the other burrows. The applicant also recommends a Burrowing Owl ESHA buffer of 150 ft. (46 meters). Staff recommends that the Commission accept the revised burrowing owl use area as the extent of the burrowing owl ESHA. However, staff continues to recommend a 164 ft. (50 meter) buffer around the Burrowing Owl ESHA. There is no justification for the applicant's reduced Burrowing Owl ESHA buffer. Residential development shall be prohibited in the Burrowing Owl ESHA buffer and the same provisions for fuel modification within the Eucalyptus ESHA buffer should be allowed within the Burrowing Owl ESHA buffer.

The applicant has stated that the October 2004 project was designed to be consistent with the Commission's November, 2000 action on the proposed Bolsa Chica Local Coastal Program (LCP). The applicant likewise compares the current project to the November 2000 LCP stating that the project is consistent with the Commission's action. The standard of review for the proposed project is the Coastal Act and not the Commission's action on the LCP since the LCP was never certified. However, even if the Commission's November, 2000 action did govern this action, as is discussed in Section C of this staff report, "Comparison of the Proposed Project With the 2000 Bolsa Chica LCP" the proposed project is not consistent with the Commission's 2000 action on the LCP in a number of significant provisions.

STAFF RECOMMENDATION:

MOTION: *I move that the Commission approve Coastal Development Permit No. 5-05-020 pursuant to the staff recommendation.*

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. OPEN SPACE, HABITAT AND PARKS

A. Open Space Restriction – Coastal Sage Scrub and Native Grassland Habitat Restoration Area

No development, as defined in Section 30106 of the Coastal Act, shall occur within the land identified as the habitat restoration area in the final habitat management plan approved by the Executive Director pursuant to Special Condition 10 (which lands are generally, but not fully, depicted in 20 and as described and depicted in an exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for the following: habitat restoration and other development necessary to implement the final habitat management plan; fuel modification within those areas identified for fuel modification in the approved final fuel management plan pursuant to Special Condition 12 ; installation of utilities (only as approved by this permit); construction of water quality management structures (only as approved by this permit), grading (only as approved by this permit), public access trail and associated appurtenances and public access and interpretive signage (only as approved by this permit), and maintenance and repair activities pursuant to and in conjunction with the management and maintenance program detailed in Special Condition 4.

The following additional development may be allowed in the areas covered by this portion of this condition (1.A.) if approved by the Coastal Commission as an amendment to this coastal development permit or a new coastal development permit: habitat restoration beyond that listed above; maintenance, repair and upgrade of utilities; installation of water quality management structures and drains; and erosion control and repair.

The lands identified in this restriction shall be maintained in accordance with the final maintenance and funding programs approved by the Executive Director in accordance with Special Condition 4.

B. Open Space Restriction - Southern Tarplant and Seasonal Pond Environmental Protection Area

No development, as defined in Section 30106 of the Coastal Act, shall occur within the Southern Tarplant and Seasonal Pond Environmental Protection Area as

approved by the Executive Director in the final habitat management plan pursuant to Special Condition 10 (which land is generally, but not fully, depicted in Exhibit 12) and as described and depicted in an exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for the following: habitat restoration and other development necessary to implement the final habitat management plan; installation of the proposed underground water reservoir (only as approved by this permit); installation of interpretive signage (only as approved by this permit), maintenance and repair activities pursuant to and in conjunction with the management and maintenance program detailed in Special Condition 4.

C. Open Space Restriction - Eucalyptus Environmentally Sensitive Habitat Area

No development, as defined in Section 30106 of the Coastal Act, shall occur within the Eucalyptus Environmentally Sensitive Habitat Area (ESHA) as generally shown in the approved final habitat management plan approved by the Executive Director (which ESHA is generally, but not precisely, depicted in Exhibit 12) and as described and depicted in an exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit.

D. Open Space Restriction – Burrowing Owl Environmentally Sensitive Habitat Area Buffer

No development, as defined in Section 30106 of the Coastal Act, shall occur within the Burrowing Owl Environmentally Sensitive Habitat Area (ESHA) as shown in the final habitat management plan approved by the Executive Director (which land is generally, but not fully, depicted in Exhibit 12) and as described and depicted in an exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for the following: habitat restoration and other development necessary to implement the final habitat management plan, grading (only as approved in this permit), irrigation (only as approved in this permit), fuel modification (only as approved in this permit), and the pedestrian trail and appurtenances (as approved in this permit).

- E. PRIOR TO ISSUANCE BY THE EXECUTIVE DIRECTOR OF THE NOI FOR THIS PERMIT, the applicant shall submit for the review and approval of the Executive Director, and upon such approval, for attachment as an Exhibit to the NOI, formal legal descriptions and graphic depictions of the portions of the subject property affected by this condition, as generally described above and shown on 12a attached to the findings in support of approval of this permit.

2. OFFER TO DEDICATE IN FEE FOR OPEN SPACE, HABITAT ENHANCEMENT AND PUBLIC ACCESS PURPOSES

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, and in order to implement the permittee's proposal, the permittee shall submit to the Executive Director, for review and approval, a proposed document(s) irrevocably offering the dedication of fee title over the areas identified below to a public agency(ies) or non-profit entity(ies) acceptable to the Executive Director, for public access, passive recreational use, habitat enhancement, and public trail purposes, as appropriate based on the restrictions set forth in these special conditions. Once the documents irrevocably offering to dedicate the areas identified below are approved, and also PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit evidence that it has executed and recorded those documents, completing that offer to dedicate. The land shall be offered for dedication subject to the restrictions on the use of that land set forth in the special conditions of this permit, and the offer to dedicate shall reflect that fact. The offer shall be recorded free of prior liens and encumbrances which the Executive Director determines may affect the interest being conveyed but subject to the OTD required by Special Condition 3. The offer shall run with the land in favor of the People of the State of California, binding all successors and assignees, and shall be irrevocable for a period of 21 years, such period running from the date of recording. The entirety of the following land shall be offered for dedication: (1) all land as described within the final habitat management plan approved by the Executive Director pursuant to Special Condition 10 as the Coastal Sage Scrub and Native Grassland Creation and Monitoring Plan for ESHA Buffer Areas and the approximately 5-acre Eucalyptus grove, as generally shown in Exhibit 20 and (2) the Southern Tarplant and Seasonal Pond Environmental Protection Area, as generally shown in Exhibit 3.

3. OFFER TO DEDICATE TRAIL AND FUEL MODIFICATION EASEMENTS

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall execute and record document(s) in a form and content acceptable to the Executive Director, irrevocably offering to dedicate to the homeowners association proposed in conjunction with the approval of the Brightwater development an easement for (1) public pedestrian and passive recreational use of the trail corridor as described in Special Condition 15 of this permit, and (2) fuel modification (as approved in the final fuel modification plan) and habitat restoration (as approved in the final habitat management plan) of the 100 foot wide area immediately south of the rear property lines of the residential lots that abut the native grassland and coastal sage scrub habitat restoration area,. The recorded document(s) shall include legal descriptions of both the permittee's entire parcel(s) and the easement areas. The recorded document(s) shall reflect that development in the offered area is restricted as set forth in the Special Conditions of this permit. The offer shall be recorded free of prior liens and encumbrances that the Executive Director determines may affect the interest being conveyed. The offer shall run with the land in favor of the People of the State of California, binding all successors and assignees, and shall be irrevocable for a period of 21 years, such period running from the date of recording. This OTD shall be recorded prior to the OTD required by Special Condition 2. The lands to be

offered for a public trail are generally depicted on Brightwater project Development Plan, dated February 18, 2005 and the lands to be offered for fuel modification and habitat restoration purposes are generally shown on the Conceptual Plan OCFA Protection Zones and Program Description, dated March 10, 2005 as modified in the final fuel modification plan and final habitat management plan of this permit.

The lands identified in this dedication shall be maintained in accordance with the final maintenance and funding program approved by the Executive Director in accordance with Special Condition 4.

4. ACCESS AND HABITAT MANAGEMENT AND MAINTENANCE

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall provide for the review and approval by the Executive Director a management and maintenance program for proposed public trail, habitat restoration and preservation areas, public facilities, associated structures and appurtenances for the foregoing and water quality management structures and associated appurtenances. The final program, which may be incorporated in whole or in part in the final habitat management plan, shall include the following:

1. IDENTIFY ALL ENTITIES RESPONSIBLE FOR MANAGEMENT AND MAINTENANCE. In general, the owner of the land shall maintain it until such time as any easement required to be offered by this permit is accepted or a fee dedication required by this permit is complete. Where an easement or a fee dedication is accepted by an entity in accordance with the terms and conditions of this permit, the holder of the easement or fee title shall be responsible for management and maintenance of the facilities within the easement or land area unless the arrangements between the original landowner and the fee or easement holder dictate that the original landowner shall retain all or part of said management and maintenance responsibility. All management and maintenance shall occur in accordance with the approved management and maintenance program.
2. IDENTIFICATION OF MANAGEMENT AND MAINTENANCE ACTIVITIES AND ASSOCIATED FUNDING PROGRAM. The management and maintenance program shall include identification of management and maintenance activities including, and funding program that will provide for the actual cost of:
 - i. maintenance and periodic repair and replacement of park facilities, trails and associated appurtenances including, but not limited to, landscaping, trail routes and surfaces, fences, benches, signage and interpretive displays, and appropriate domestic pet controls and services and,
 - ii. on-going habitat protection, restoration and maintenance as detailed in approved Final Habitat Management Plan approved by the Executive Director pursuant to Special Condition 10, including regular exotic plant

- removal, repair and maintenance of interpretive signs, and funding of public outreach programs, including resident education; and
- iii. maintenance of drainage systems, water quality management structures and other devices required to protect on-site habitat and ocean waters.

- 3. LEGAL AUTHORITY. The program shall demonstrate the legal ability of the assigned entities to undertake the development and maintain said development in accordance with the requirements of this permit.

- B. The permittee shall undertake development in accordance with the approved final program. Any proposed changes to the approved final program shall be reported to the Executive Director. No changes to the approved final program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

5. BURROWING OWL SURVEY AND MITIGATION PLANS REQUIREMENT

- A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director, for review and approval, a burrowing owl survey and mitigation plans consistent with the "Burrowing Owl Survey Protocol and Mitigation Guidelines", prepared by the California Burrowing Owl Consortium, dated April 1993 and the "Staff Report on Burrowing Owl Mitigation", prepared by the California Department of Fish and Game (DFG), Environmental Services Division, dated September 25, 1995. Prior to submittal to the Executive Director the burrowing owl survey plan shall be reviewed and approved by DFG. The survey and mitigation protocol and guidelines include avoidance of impacts during the nesting and breeding seasons and shall be included in the required plans and reflected in the Construction/Development Phasing Special Condition of this permit.
- B. The permittee shall undertake development in accordance with the approved final burrowing owl survey and mitigation plans. Any proposed changes to the approved burrowing owl survey and mitigation final plans shall be reported to the Executive Director. No changes shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

6. COVENANTS, CONDITIONS, AND RESTRICTIONS (CC&R'S), AND FINAL TRACT MAPS

- A. Consistent with the applicant's proposal, the applicant shall establish covenants, conditions and restrictions (CC&R's), or an equivalent thereof, for the proposed residential lots to address ownership and management of all subdivision streets, roads, trails, parks, habitat restoration and preserve areas, environmentally sensitive habitat areas, fuel modification plan areas, common landscaped areas

and water quality management plan facilities. The CC&R's shall reflect all applicable requirements of this coastal development permit, including but not limited to the limitations on the development of the park, trail and habitat restoration and preservation areas as proposed by the applicant and as conditioned by this permit.

- B. Subject to the review and approval of the Executive Director, the applicant shall, where feasible, consolidate proposed open space lots that are contiguous with one another and that are to be held by a common owner.
- C. All areas to be owned and/or managed by the homeowners association pursuant to Special Conditions 2 and 3 of this permit shall be shown as lettered lots on the revised vested tentative tract map (VTTM) 15460, subject to the review and approval of the Executive Director.
- D. As soon as a homeowner's association or similar entity comprised of the individual owners of the 349 proposed residential lots is created, the applicant shall transfer title to the lots described in Special Condition 2 to that entity.
- E. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, and prior to recordation of any CC&R's, or tract maps associated with the approved project, proposed versions of said CC & R's and tract maps shall be submitted to the Executive Director for review and approval. The Executive Director's review shall be for the purpose of ensuring compliance with the standard and special conditions of this coastal development permit, including ensuring that, pursuant to paragraph A of this condition, the CC&Rs also reflect the ongoing restrictions and obligations imposed by these conditions. The restriction on use of the land cited within the special conditions of this permit shall be identified on the Tract Map, where appropriate, as well as being placed in the CC & R's.
- F. Simultaneous with the recording of the final tract map(s) approved by the Executive Director, the permittee shall record the covenants, conditions and restrictions approved by the Executive Director, against the property. The applicant shall submit a recorded copy of the covenants, conditions and restrictions within 30 days of their recordation to the Executive Director. The CC & R's may not be removed or modified without approval of the Commission, or its successor in interest, and the CC& R's shall indicate that restriction within their terms.

7. CONSTRUCTION/DEVELOPMENT PHASING

- A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a revised, final construction/development phasing plan for review and approval by the Executive Director, which shall conform to the following:

1. All development, including removal of burrowing owl foraging habitat and grading, shall be consistent with the requirements of the Burrowing Owl Survey and Mitigation Plan Requirement Special Condition of this permit. No grubbing, grading or other development shall take place during raptor nesting season if raptors are nesting. Within 30 days of the initial removal of existing raptor foraging habitat consisting of non-native grassland/ruderal vegetation, or within additional time as granted by the Executive Director for good cause, the applicant shall initiate the Coastal Sage Scrub and Native Grassland Creation Program as approved pursuant to Special Condition 10 of this permit. The applicant shall carry out the restoration work in an expeditious manner in order to reestablish raptor foraging habitat in the affected area.
 2. Grading of the public trail shall occur during initial grading operations, which shall be carried out consistent with the provisions for the protection of the existing ESHA. The public trail shall be constructed concurrent with the construction of the main roads and streets of the subdivision. The public trail shall be completed and open for public use, including the installation of habitat protection fencing pursuant to the approved final habitat management plan and the installation of signage and interpretive displays consistent with the public access, recreation improvements and signage special condition of this permit, concurrently with the opening of the first model home for public viewing.
- B. The permittee shall undertake development in accordance with the approval final construction/development phasing plans. Any proposed changes to the approved final construction/development phasing plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

8. EROSION CONTROL PLAN

- A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, a final Erosion Control Plan that conforms to the requirements of this permit, and has been approved by the County of Orange. The Erosion Control Plan shall include written descriptions and site plans, as necessary, to describe the non-structural and structural erosion, sediment and polluted runoff controls to be used during project construction consistent with the requirements of this permit. The Erosion Control Plan shall incorporate the project Storm Water Pollution Prevention Plan and any additional construction phase erosion, sedimentation and polluted runoff control features of the project. The permittee shall undertake development in accordance with the approved final plan. In addition, the Erosion Control Plan shall include the following requirements:

1. The plan shall delineate the areas to be disturbed by grading or construction activities and shall include any temporary access roads, staging areas and stockpile areas. The natural areas on the site shall be clearly delineated on the project site with fencing or survey flags.
2. The plan shall specify that should grading take place during the rainy season (October 16 – April 15) the permittee shall install or construct temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing, stabilize any stockpiled fill with geofabric covers or other appropriate cover, install geotextiles or mats on all cut or fill slopes and close and stabilize open trenches as soon as possible. These erosion measures shall be required on the project site prior to or concurrent with the initial grading operations (or, if grading begins during the dry season, prior to the onset of the rainy season) and maintained throughout the development process to minimize erosion and sediment from runoff waters during construction. All sediment should be retained on-site unless removed to an appropriate approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive fill.
3. The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than 30 days during the dry season, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils and cut and fill slopes with geotextiles and/or mats, sand bag barriers, silt fencing; temporary drains and swales and sediment basins. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume. If grading or site preparation cease during the rainy season, the requirements under Condition 8.A.2 above must be maintained until the project is completed or the site restored to original conditions.
4. The plan shall include requirements for a third party inspection by a licensed water quality professional of construction phase erosion sedimentation and pollution control features of the project. Inspections shall determine if the project is in compliance with the Erosion Control Plan and report the results to the contractors for management of the erosion, sedimentation and pollution control features of the project.
 - a. All structural, construction phase BMPs shall be inspected, cleaned and repaired, as needed prior to the onset of the storm season, no earlier than August 1 and no later than October 1st of each year; after every major storm event (greater than 0.75 inch of precipitation); and at least monthly throughout the construction phase.
 - b. Annual reports containing data and analytical assessment of data, shall be submitted in July of each year to the Executive Director of the Commission and to the Santa Ana Regional Water Quality Control Board during the construction phase.

9. **CONSTRUCTION STAGING AREA AND FENCING**

- A. All construction plans and specifications for the project shall indicate that impacts to wetlands and environmentally sensitive habitats shall be avoided and that the California Coastal Commission has not authorized any impact to wetlands or other environmentally sensitive habitat. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit a final construction staging and fencing plan for the review and approval of the Executive Director which indicates that the construction in the construction zone, construction staging area(s) and construction corridor(s) shall avoid impacts to wetlands and other sensitive habitat consistent with this approval. The plan shall include the following requirements and elements:
1. Wetlands and any environmentally sensitive habitats shall not be affected in any way, except as specifically authorized in this permit.
 2. Prior to commencement of construction, temporary barriers shall be placed at the limits of grading adjacent to wetlands and all ESHA. Solid physical barriers shall be used at the limits of grading adjacent to all ESHA. Barriers and other work area demarcations shall be inspected by a qualified biologist to assure that such barriers and/or demarcations are installed consistent with the requirements of this permit. All temporary barriers, staking and fencing shall be removed upon completion of construction.
 3. No grading, stockpiling or earth moving with heavy equipment shall occur within ESHA, wetlands or their designated buffers, except as noted in the final habitat management plan approved by the Executive Director pursuant to the following condition.
 4. No construction equipment shall be stored within any ESHA, wetlands or their buffers.
 5. The plan shall demonstrate that:
 - a. Construction equipment, materials or activity shall not occur outside the staging area and construction zone and corridors identified on the site plan required by this condition; and
 - b. Construction equipment, materials, or activity shall not be placed in any location that would result in impacts to wetlands or other sensitive habitat;
 6. The plan shall include, at a minimum, the following components:
 - a. A site plan that depicts:
 - i. limits of the staging area(s)
 - ii. construction corridor(s)
 - iii. construction site
 - iv. location of construction fencing and temporary job trailers with respect to existing wetlands and sensitive habitat
 - v. Compliance with 'General Construction Responsibilities/ Protection of Water Quality' Special Condition of this coastal development permit.
- B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

10. FINAL HABITAT MANAGEMENT PLAN

- A. The permittee shall revise, implement and comply with all the habitat creation, restoration and preservation measures for the project site as approved by the Executive Director in the final Habitat Management Plan pursuant to this special condition.
- B. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit a revised, final habitat management plan for review and approval by the Executive Director. Prior to submittal of the final habitat management plan to the Executive Director, it shall be reviewed and approved by the California Department of Fish & Game and U.S. Fish & Wildlife Service. The final habitat management plan shall substantially conform to the habitat management plan dated January 17, 2005 as modified and specified below and by the requirements of the "Revised Tentative Tract Map and Plans" special condition of this permit. The final habitat management plan shall be modified as follows:
1. Eucalyptus ESHA Buffer Width -The Eucalyptus ESHA buffer between the Eucalyptus ESHA and the residential lots shall be a minimum width of 328 feet (100 meters) as measured from the northern and western edge of the defined Eucalyptus Grove ESHA, as depicted in Figure 1 of Exhibit 20. The Eucalyptus grove ESHA buffer shall be planted consistent with the approved final habitat management plan as modified by the special conditions of this permit.
 2. Eucalyptus ESHA Buffer Plant Palette – The proposed restricted coastal sage scrub and native grassland creation plant palette shall only be allowed within the fifty (50) feet closest to the rear lot lines of the residential lots. A revised plant palette shall be submitted for the remaining 278 feet of the 328 foot wide (100-meter) Eucalyptus ESHA Buffer. For areas on the relatively flat mesa top, the plant palette shall contain species appropriate to a native California grassland community in coastal Southern California. For areas on the relatively steep bluff faces, the plant palette shall contain species appropriate to coastal Southern California coastal sage scrub, coastal bluff scrub communities, or additional native California grassland vegetation.
 3. Irrigation and Other Fuel Modification Activities Within the ESHA Buffer – Permanent, in ground irrigation shall be allowed within the Eucalyptus ESHA buffer area only within the 100 foot area closest to the rear lot lines of the proposed residential lots. Within the 50-foot area closest to the rear lot lines of the proposed residential lots, periodic mowing (every 3 to 5 years) may be allowed in the native grassland. If needed for initial plant establishment, temporary, above ground irrigation (3-5 years) may be allowed within the Eucalyptus ESHA buffer area beyond 50 feet of the residential lot lines. No other fuel modification activities may be allowed to take place within the 328 foot 100-meter Eucalyptus ESHA buffer.

4. Burrowing Owl ESHA Buffer - The Burrowing Owl ESHA as depicted on Figure 1 Exhibit 20, shall be surrounded by a vegetated buffer measuring no less than 164 feet (50 meters) . The plant palette for the Burrowing Owl ESHA buffer shall be revised to contain species appropriate to a native California grassland community in coastal Southern California areas on the relatively flat mesa top, and for areas on the relatively steep bluff faces, the plant palette shall contain species appropriate to coastal Southern California coastal sage scrub, coastal bluff scrub communities, or additional native California grassland vegetation. The buffer area shall be planted consistent with the plant palette approved herein. Only the 50 feet closest to the rear yards of the residential lots shall be permanently irrigated. Also within 100 feet of the residential lot lines, periodic mowing (every 3 to 5 years) may be allowed if needed for initial plant establishment. Temporary, above ground irrigation (3-5 years) may be allowed within the remainder of the Burrowing Owl ESHA buffer area beyond 50 feet of the residential lot lines if needed for plant establishment. No other fuel modification activities may be allowed to take place within the 164 foot (50 meter) Burrowing Owl ESHA buffer. Only minor grading associated with the construction of the approved trail, approved water quality treatment facilities or the removal of existing roads for habitat creation and restoration purposes shall be allowed.
5. Grading Adjacent to Eucalyptus ESHA - There shall be no grading within 500 feet any occupied nest within of the Eucalyptus ESHA during the breeding season (considered to be from February 15 through August 31). If grading occurs within 500 feet of the Eucalyptus ESHA during the breeding season the following measures must be taken:
 - a. The permittee shall staff a qualified monitoring biologist on-site during all grading and any other project-related work using mechanized equipment. The biologist must be knowledgeable of raptor biology and ecology and shall ensure that no grading or other activities that would disturb breeding raptors are permitted if any nests are occupied within 500 feet of grading or other such activity.
 - b. Prior to initiating clearing and/or grading during the raptor breeding season, the biological monitor shall meet on-site with the construction manager and/or other individual(s) with oversight and management responsibility for the day-to-day activities on the construction site to discuss implementation of the relevant avoidance/minimization/mitigation measures for raptors. The 500 ft. buffer shall be marked in the field with temporary fencing and maintained throughout the breeding season. The biologist shall meet as needed with the construction manager (e.g., when new crews are employed) to discuss implementation of these measures.
6. 3.2-acre Southern Tarplant and Seasonal Pond Environmental Protection Area -The habitat management plan shall be modified to include the proposed 3.2-acre Southern Tarplant and Seasonal Pond Environmental Protection Area as proposed by the applicant. The plan shall include any needed minor grading, including staging, staking, fencing and timing of

activities, identification of and non-mechanical methods of removal of any existing weeds and undesirable plants, a plant palette, planting methods including any needed temporary above ground irrigation and initial and long-term monitoring and maintenance of the habitat preserve area. No in ground permanent irrigation shall be allowed in the preserve. The plan shall include a 100-foot buffer around the Los Patos wetland, planted with appropriate plants from the approved plant palette and a 50-foot buffer around the Southern Tarplant, planted with appropriate plants from the approved plant palette and shall be fenced/vegetated on the outer edges to prevent access to the preserve area by domestic pets and humans. The plan shall ensure that no development, with the exception of the removal by hand of any undesirable plants, as approved by the Executive Director, shall occur within the Los Patos wetlands. Further, the removal or relocation of any Southern Tarplant shall be prohibited. The plan shall include a maintenance and monitoring plan for the preserve area. The initial monitoring of the preserve area shall be for a period of no less than five years and shall be in substantial conformance with the monitoring plan, as approved by the Executive Director, for the Coastal Sage Scrub and Native Grassland Creation area. The Southern Tarplant and Seasonal Pond Environmental Protection Area shall be monitored and maintained pursuant to a long-term monitoring and maintenance plan to be approved by the Executive Director as required by this special condition. The long-term monitoring and maintenance plan shall ensure that the preserve area will be monitored at least annually after the initial five-year monitoring period and that all plantings are maintained in good growing condition. The Southern Tarplant and Seasonal Pond Environmental Protection Area shall also be subject to the perpetual management and maintenance provisions specified below. The homeowners association shall bear responsibility for the management of the Southern Tarplant and Seasonal Pond Environmental Protection Area as approved in this special condition and the other applicable special conditions of this permit.

7. The permittee shall submit a final report prepared by the biological monitor to the Executive Director, for review and approval, within 60 days of project completion that includes: as-built construction drawings with an overlay of wetlands and coastal sage scrub that were avoided, photographs of CSS and wetland areas avoided, and other relevant summary information documenting that development, including habitat restoration and preservation measures are in general compliance with all conditions of this permit.
8. The permittee shall install protective fencing or barriers along any interface with developed areas and/or use other measures, designed in consultation with the Resources Agencies and approved by the Executive Director, to deter human and pet entrance into all restored and preserved wetland, CSS and ESHA buffer areas and the area of the lower bench to be sold to the State of California. Plans for fencing and/or other preventative measures shall be submitted to the Executive Director for review approval prior to the

issuance of the coastal development permit in accordance with the 'Construction Staging Area and Fencing' special condition of this permit.

9. The permittee shall implement a perpetual management, maintenance and monitoring plan for all the habitat management plan areas. The plan shall include the monitoring activities of the final habitat management plan as approved by the Executive Director and shall also include a perpetual management, maintenance and monitoring plan beyond that specified in the "Conceptual Coastal Sage Scrub and Native Grassland Creation and Monitoring Plan for ESHA Buffer Associated with Brightwater Project, Orange County, CA," prepared by Glen Lukos and Associates, dated January 17, 2005. The permittee shall also establish a non-wasting endowment in favor of the State of California, for an amount determined in consultation with the Resources Agencies and approved by the Executive Director, to secure the ongoing funding for the perpetual management, maintenance and monitoring of the habitat management plan area by an agency, non-profit organization, or other entity approved by the Executive Director. The amount of the non-wasting endowment shall be based on an analysis of the amount needed to maintain and monitor the habitat creation and preservation areas as described above and approved in the final habitat management plan of this permit. The endowment shall be funded by an initial contribution by the developer as well as annual payments assessed on each dwelling unit (adjusted annually consistent with the Consumer Price Index) for each residential unit. Until a qualified management entity, subject to the review and approval of the Executive Director, is identified, the permittee shall be responsible for such management.
10. The permittee shall develop a resident education program in conjunction with the Orange County Animal Control office. The program shall advise residents of the potential impacts to sensitive plant and animal species and the potential penalties for taking (i.e. disturbing or harming) such species. The program shall include, but not be limited to, information pamphlets and signage included as part of the interpretive program within the habitat management plan area. Informational pamphlets shall be distributed to all residences on a regular basis (e.g. once a year). At a minimum, the program shall include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, impacts from free-roaming pets (particularly domestic and feral cats), legal protection afforded to the listed and sensitive species, penalties for violations of Federal and State laws, reporting requirements, the importance of the presence of large predators such as the coyote in maintaining the habitat, and project features designed to reduce the impacts to these species and promote the species continued successful occupation of the preserved areas.
11. Restoration activities, such as weed control and removal and planting and seeding shall not take place within 500 feet of the Eucalyptus ESHA during the breeding season where raptors are present unless the permittee provides

a biological monitor who will ensure no impacts to raptors occur and the permittee must obtain prior written approval from the Resources Agencies. Prior to initiation of such activities, the permittee shall submit written evidence of Resources Agency approval for the review and approval of the Executive Director.

12. Appropriate controls and services that prohibit the entry of domesticated animals into habitat restoration areas shall be identified and implemented. In addition, appropriate controls and services shall be identified and implemented for areas where domestic animals, only on leashes, may be permitted, such as trails.
- C. The permittee shall undertake development in accordance with the approved final plans. As in all cases, this requirement continues to apply to successors in interest, including purchasers of individual residential lots, and their ongoing management of their property. Any proposed changes to the approved final plans or phases of construction shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

11. LANDSCAPE REQUIREMENTS

- A. All areas disturbed and/or denuded by the development and not approved for hardscape or other development that is incompatible with re-vegetation shall be re-vegetated and maintained to protect habitat and to prevent erosion into habitat areas, wetlands, and coastal waters. Such re-vegetation shall occur in accordance with the requirements of the special conditions of this permit. All required plantings shall be maintained in good growing condition throughout the life of the project, and whenever necessary, shall be replaced with new plant materials that conform to the requirements of the special conditions of this permit.
- B. All landscaping on the private residential lots within VTTM 15460, within the proposed local parks and along the streets and roads of the subdivision, (including temporary erosion control and final landscaping) for the entire development covered by this permit shall be of plants native to coastal Orange County and appropriate to the natural habitat type or non-native, non-invasive, low water use plants on the "Approved Plant List for Non-Habitat/Non-Buffer Areas" to be approved by the Executive Director pursuant to this special condition. No plant species listed as problematic and/or invasive by the California Native Plant Society, California Exotic Pest Plant Council, or as may be identified from time to time by the State of California, or any plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be utilized anywhere within the proposed development area, including the landscaping within the private residential lots of VTTM 15460, along the streets and roads and the park areas. PRIOR TO ISSUANCE OF

THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, subject to the review and approval of the Executive Director, a plant list for non-habitat/non-buffer areas that complies with the above criteria. . Once approved by the Executive Director this list shall be known as the "Approved Plant List for Non-Habitat/Non-Buffer Area" and shall be recorded in the covenants, conditions and restrictions of the homeowners association pursuant to Special Condition 6 of this permit. Only those plants on the Approved Plant List for Non-Habitat/Non-Buffer Areas" shall be planted and allowed to grow within the non-habitat/non-buffer areas of the project.

- B. All irrigation, both temporary and permanent, shall be prohibited in wetlands and the Eucalyptus ESHA, Burrowing Owl ESHA, and Southern Tarplant ESHA. Permanent, in-ground irrigation may be allowed on private residential lots, common area non-habitat non-buffer areas, and within the fifty (50) feet closest to the rear yards of the residential lots that front the Eucalyptus ESHA buffer, if required by Orange County Fire Authority (OCFA), and as approved in the final Habitat Management Plan. In all other areas, only temporary, above ground irrigation may be allowed to establish the plantings, where needed, and if approved in this permit. Common area irrigation must further comply with the following provision:

Irrigation allowed in the non-habitat/non-buffer areas shall have automatic rain gauges connected to irrigation controllers and shall be installed and maintained by the homeowners association in the common areas. The rain gauges shall monitor rainfall volume and interrupt watering schedules in response to site-specific rainfall conditions. Rain gauges shall be located adjacent to controllers to facilitate monitoring by maintenance personnel. Use of drip and efficient low-flow irrigation emitters to minimize irrigation requirements and over-irrigation shall also be used where appropriate.

- D. For visual purposes, prior to the issuance of the coastal development permit, a visual enhancement plan shall be submitted for review and approval by the Executive Director along with written evidence of review and approval from the Manager, PFRD/HBP Program Management and Coordination, in consultation with the Manager, Environmental and Project Planning Division of the County of Orange, that is designed to soften, through selective placement of primarily native vegetation, the visual impact of large expanses of wall or roof within residentially developed portions of the site that would be visible from significant vantage points along the proposed trail and parks and from off-site publicly owned open space and recreation areas and public trails. Such plantings shall comply with fuel modification requirements of the relevant fire authority. The landowner shall install vegetation for visual softening within 180 days of occupancy of each applicable residence in accordance with the CC&Rs for the proposed residences.

- E. Temporary Erosion Control Measures. See 'Erosion Control' Condition.
- F. Timing of Final Landscaping. Final landscaping guidelines for all areas outside the habitat management plan area shall be completed and submitted for review and approval by the Executive Director prior to the issuance of the coastal development permit. The guidelines shall state that all common area landscaping shall be installed prior to the issuance of the first certificate of use and occupancy and shall have a licensed landscape architect or licensed landscape contractor certify that it was installed in accordance with the approved plan. The guidelines shall also state that landscaping of each residential lot shall be completed prior to the issuance of the certificates of use and occupancy for the individual residential lot. The guidelines shall be consistent with the requirements of this coastal development. The timing of re-vegetation efforts within the habitat restoration areas identified in the revised final Habitat Management Plan shall be as indicated in the revised final Habitat Management Plan approved by the Executive Director.
- G. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit landscape palette lists to be incorporated into the landscaping guidelines detailed above subject to the review and approval of the Executive Director, that identify: 1) the native plant species that may be planted in the development; 2) a list of the non-native, non-invasive common garden plant species that may be planted on the residential lots; 3) the non-native, non-invasive turf that may be planted within approved turf areas in the two local parks, and 4) the invasive plant species that are prohibited from use anywhere within the development. The landscape palette for the development shall be consistent with the Approved Plant List for Non-Habitat/Non-Buffer Areas as reviewed and approved by the Executive Director. These lists shall remain available for consultation and shall be recorded in the covenants, conditions and restrictions as required by Special Condition 6. Additions to or deletions from these lists may be made by the Executive Director of the California Coastal Commission, in consultation with the project's restoration ecologist and the resource agencies. No deviations from the list shall occur in the plantings on the site without an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.
- H PRIOR TO SUBMITTAL OF FINAL LANDSCAPE PALETTE LISTS, LANDSCAPE PLANS, AND TEMPORARY EROSION CONTROL PLANS, the permittee shall obtain the review and approval of those lists and plans by the California Department of Fish and Game, the United States Fish and Wildlife Service and the Orange County Fire Authority. Written evidence of the required reviews and approvals shall be submitted with the lists and plans submitted to the Executive Director.

- I. CONCURRENT WITH SUBMITTAL OF ALL PLANS IDENTIFYING LANDSCAPING, the permittee shall provide an analysis of each plan submitted, prepared by a qualified biologist, which documents that the landscaping complies with all of the landscaping and habitat management requirements of this permit.
- J. Monitoring. Five years from the date of the completion of the installation of landscaping as required in these special conditions, the permittee shall submit, for the review and approval of the Executive Director, a landscape monitoring report, prepared by a licensed landscape architect or qualified resource specialist, that certifies the on-site landscaping is in conformance with the requirements of the special conditions of this permit and the landscape plans approved pursuant to the special conditions of this permit. The monitoring report shall include photographic documentation of plant species and plant coverage. If the landscape monitoring report indicates the landscaping is not in conformance with or has failed to meet the performance standards specified in the landscaping plan approved pursuant to this permit, the permittee, or successors in interest, shall submit a revised or supplemental landscape plan for the review and approval of the Executive Director. The revised landscaping plan must be prepared by a licensed landscape architect or a qualified resource specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan. The permittee or successor in interest shall implement the supplemental landscaping plan approved by the Executive Director and/or seek an amendment to this permit if required by the Executive Director.

12. REVISED FUEL MODIFICATION PLAN REQUIREMENTS

- A. All fuel modification shall be consistent with the requirements of the final Habitat Management Plan approved by the Executive Director pursuant to Special Condition 10 and the final fuel management plan approved by the Executive Director pursuant to subpart B of this condition, which plan is conceptually described in the "Conceptual Plan OCFA Protection Zones and Program Description" for the Brightwater development project, prepared by FORMA, dated March 10, 2005. Proposed and future residential and appurtenance structures shall be set back a sufficient distance from proposed habitat restoration and preservation areas such that there will be no vegetation pruning, thinning or clearance, mowing or permanent irrigation required by the relevant fire authority (e.g. Orange County Fire Authority) within the 328 feet (100 meters) Eucalyptus ESHA buffer, the 100 foot (30.5 meters) wetland buffers, the 164 feet (50 meters) burrowing owl ESHA buffers, or the 50 foot (15.2 meters) Southern Tarplant ESHA buffer, other than as specifically allowed by the final Habitat Management Plan approved by Special Condition 10 of this permit. Prior to submittal of the final fuel modification plan to the Executive Director, but

following review and approval of the final fuel modification plan and the final habitat management plan by the Orange County Fire Authority (OCFA) pursuant to Special Condition 10, the applicant shall submit the final fuel modification plan to the California Department of Fish and Game (DFG) for their review and written approval. This requirement shall not result in any reduction of restored and preserved habitat area or public access opportunities.

- B. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit a final fuel management plan for the development for review and approval by the Executive Director, which plan shall be consistent with the requirements outlined above and in the special conditions of this permit. The final fuel management plan required after approval by the Executive Director, shall include a statement that any future changes to the plan, including any changes required by the relevant fire authority or other resource agencies, shall be reported to the Executive Director of the Coastal Commission, and shall require an amendment to this permit or a new coastal development permit prior to implementation of those changes unless the Executive Director of the Coastal Commission determines that no amendment or new permit is required.
- C. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.
- D. For purposes of this permit, this condition shall serve as notification to present and future property owners that certain structures and areas of land are subject to special fuel treatment requirements that are specified in the final fuel management plan approved by the Orange County Fire Authority and the Executive Director of the Commission. Among those requirements is a requirement that residential structures facing upon native restoration or open space areas incorporate building construction features consistent with Orange County Fire Authority guidelines for construction of structures within special fire hazard areas. Furthermore, there is a prohibition on the placement of combustible materials in the rear yards of the residential lots that abut open space areas. Proposed and future development shall conform to the requirements of the approved final fuel management plan.

13. LIGHTING

- A. All lighting within the development shall be directed and shielded so that light is directed away from wetlands, and other habitat and buffer areas. Floodlamp shielding and/or sodium bulbs shall be used in developed areas to reduce the amount of stray lighting into native restoration and preservation areas. Furthermore, no skyward-casting lighting shall be used. The lowest intensity

lighting shall be used that is appropriate to the intended use of the lighting. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, a lighting plan to protect the wetlands, and other habitat and buffer areas from light generated by the project. The lighting plan to be submitted to the Executive Director shall be accompanied by an analysis of the lighting plan prepared by a qualified biologist which documents that it is effective at preventing lighting impacts upon adjacent wetlands and environmentally sensitive habitat and buffer areas.

- B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

14. WALLS, FENCES, GATES, SAFETY DEVICES AND BOUNDARIES

- A. Fences, gates, safety devices and boundary treatments within or controlling access to environmentally sensitive habitat areas (ESHA) shall be designed to allow the free ingress, egress and traversal of the habitat areas of the site by wildlife, including the coyote. Where the backyards of residences abut habitat buffer areas, there shall be walls, fences, gates, safety devices and boundary treatments, as necessary, to contain domestic animals within the residential development and along the approved trails and exclude such animals from sensitive habitat. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit final revised plans showing the location, design, height and materials of all walls, fences, gates, safety devices and boundary treatments for the review and approval of the Executive Director. Said plans shall be accompanied by an analysis of the wall, fence, gate and boundary treatment plan prepared by a qualified biologist that documents that the modified walls, fences, gates and safety barriers and boundary treatments will minimize the uncontrolled entry of domesticated animals into wetlands and environmentally sensitive habitat and buffer areas and allow for free ingress, egress and traversal of the wetland and habitat and buffer areas of the site by wildlife. The plans shall have received prior review and approval by the County of Orange, the California Department of Fish and Game and the United States Fish and Wildlife Service.
- B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

15. PUBLIC ACCESS AND RECREATION REQUIREMENTS AND IMPROVEMENTS

A. Public Access Requirements

1. Streets, Roads and Public Parking

All streets, roads and parking shall be provided as described on the revised Brightwater project Development Plan, dated February 18, 2005. All publicly and privately maintained streets, roads and public parking areas identified on the above Development Plan shall be for public street purposes including, but not limited to, pedestrian, bicycle and vehicular access. Parking shall be provided as described in the applicant's January 21, 2005 coastal development permit application submittal. All streets, roads and public parking areas shall be open for use by the general public 24 hours per day, with the exception of standard limited parking restrictions for street sweeping/maintenance purposes. Long term or permanent physical obstruction of streets, roads and public parking areas shall be prohibited. All public entry controls (e.g. gates, gate/guard houses, guards, signage, etc.) and restrictions on use by the general public (e.g. preferential parking districts, resident-only parking periods/permits, etc.) associated with any streets or parking areas shall be prohibited.

2. Public Trail

No development, as defined in Section 30106 of the Coastal Act, shall occur within the public trail corridor as proposed in the amended application submittal of February 18, 2005 and March 4, 2005 as approved by the Executive Director (which land is generally, but not fully, depicted in Exhibit 12) and as described and depicted in an exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for the following development: grading and construction necessary to construct the trails and appurtenances (e.g. signs, interpretive displays, benches, trash receptacles, protective fencing), vegetation removal and planting, drainage devices, erosion control and repair, maintenance and repair activities pursuant to and in conjunction with the management and maintenance program detailed in Special Condition 4 and as required below. Development that diminishes permanent public access shall be prohibited. As proposed, the public pedestrian trail shall have a decomposed granite surface, shall be six feet in width and shall be located within twenty-five feet of the southern lot lines of the proposed residential lots. The public access trail shall be open to the general public for passive recreational use.

The lands identified in this restriction shall be maintained in accordance with the final maintenance and funding program approved by the Executive Director in accordance with Special Condition 4.

3. Local Parks

The two local parks shown on the revised Brightwater project Development Plan dated February 18, 2005 (which land is generally, but not fully, depicted on Exhibit 12), shall be open to the general public and maintained for passive park use. No development, as defined in Section 30106 of the Coastal Act, shall occur within the local parks as identified, described and depicted in an exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for the following development: grading and construction necessary to construct the parks, vegetation removal and planting, drainage devices, erosion control and repair, maintenance and repair activities pursuant to and in conjunction with the management and maintenance of the parks.

- B. The applicant shall ensure the construction of the public access and passive recreation improvements for park and trail purposes as described in the project description submitted by the applicant; in the January 21, 2005 submittal, as amended on February 18, and March 4, 2005, and as modified by the special conditions of this permit. All public access and passive recreation improvements for park and trail purposes shall be completed and open for use by the general public in accordance with the final construction phasing plan approved by the Executive Director in accordance with the 'Construction/Development Phasing' special condition of this permit. Furthermore, the facilities identified in this condition shall be maintained in accordance with the final maintenance and funding program approved by the Executive Director in accordance with the 'Access and Habitat Management and Maintenance' special condition of this permit.
- C. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit revised, final, detailed plans of the public access and recreation improvements for park and trail purposes for review and approval by the Executive Director. All facilities constructed shall be sited and designed to minimize disturbance to adjacent habitat areas and to minimize the obstruction of public views. All facilities shall conform to the final habitat management plan approved by the Executive Director pursuant to condition 10. Plans shall identify all structures including location, dimensions, materials and colors, and use as well as sign and interpretive display text and graphics, size and orientation. All plans shall be of sufficient scale and detail to verify the location, size and content of all signage, and the location and orientation, size, materials and use of structures during a physical inspection of the premises. Plans shall be consistent with the modifications required in the "Revised Tentative Tract Map and Development Plans" special condition of this permit. The final plans shall also comply with the following:
 - 1. Public Trail Plan: The final plans submitted for review and approval to the Executive Director shall include detailed trail improvement plans. The detailed final trail improvement plans submitted shall be in substantial conformance with the February 18, 2005 plans identified above and as modified by the conditions of this permit. Said plan(s) shall include trail

alignment, width, surface and materials; designated parking; designated overlooks; recreational appurtenances such as benches, refuse containers; fencing between the trail and habitat buffer areas; erosion control and footpath control plantings (such as cactus adjacent to sensitive areas).

2. Sign Plan: The final plans submitted for review and approval to the Executive Director shall include a detailed signage plan that directs the public to the public trail and public passive recreation opportunities on the project site. Signs shall invite and encourage public use of access opportunities and shall identify and direct the public to their locations, including the three proposed paseos leading to the public trail. Signage shall be visible from the Warner Avenue/Los Patos intersection area and Warner Avenue/Bolsa Chica Street intersection area and from internal circulation roads and parks. Signage shall include public facility identification monuments (e.g. public park name); community identification monuments (e.g. Brightwater Community); facility identification/directional monuments (e.g. location of amenities); informational signage and circulation; interpretive signs, and roadways signs. Signs shall also identify and explain key biological habitat preservation areas (Eucalyptus grove, burrowing owl and Southern Tarplant ESHAs and the two freshwater wetlands) and the significant prehistoric and historic cultural resources of the site and Bolsa Chica area, and identify restricted areas. Prior to submittal to the Executive Director, the final interpretive displays and interpretive signage shall be reviewed by and comments solicited from the interested agencies and groups as specified in the "Revised Tentative Tract Map and Development Plans" special condition and submitted to the Executive Director. Signs and displays not explicitly permitted in this document shall require an amendment to this permit unless the Executive Director determines that no amendment is required.
- D. The revised plans shall, prior to submittal to the Executive Director, be reviewed and approved by the County of Orange Department of Beaches, Harbors and Parks after receipt of comments from the interested agencies and groups specified above.
 - E. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.
 - F. PRIOR TO ISSUANCE BY THE EXECUTIVE DIRECTOR OF THE NOI FOR THIS PERMIT, the applicant shall submit for the review and approval of the Executive Director, and upon such approval, for attachment as an Exhibit to the NOI, formal legal descriptions and graphic depictions of the portions of the subject property

affected by this condition, as generally described above and shown on Exhibit 12a attached to the findings in support of approval of this permit.

16. WATER QUALITY

- A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, a final revised Water Quality Management Plan (WQMP) for the post-construction project site. The WQMP shall be prepared by a licensed water quality professional and shall include project plans, hydrologic calculations, and details of the structural and non-structural Best Management Practices (BMPs) that shall be included in the project.

The final plan shall be reviewed by the consulting engineering geologist to ensure conformance with geotechnical recommendations. The final plan shall demonstrate substantial conformance with the Water Quality Management Plan (WQMP) for Brightwater Unincorporated County of Orange, CA Vesting Tentative Tract Map 15460, dated (revised) January 21, 2005, prepared by The Keith Companies. The final plan shall also include detailed plans for the proposed rip-rap erosion control device proposed below the 66" stormdrain outlet. The rip-rap shall be modified as required in special condition 17 and shall be reviewed and approved by the State Lands Commission (SLC) for that portion of the development that lies on land owned by SLC. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

1. Best Management Practice Specifications

- a. Site Design, Source Control, and Treatment Control BMPs shall be designed to reduce, to the maximum extent practicable, the volume, velocity and pollutant load of storm water and nuisance flow leaving the developed site.
- b. Maintain, to the maximum extent practicable, pre-development peak runoff rates and average volume of runoff;
- c. Post-construction structural BMPs (or suites of BMPs) shall be designed to treat, infiltrate or filter the amount of storm water runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, and/or the 85th percentile, 1-hour storm event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMPs.
- d. The structural BMPs shall be constructed prior to or concurrent with the construction of infrastructure associated with the development within Tentative Tract 15460. Prior to the occupancy of residential structures approved by this permit, the structural BMPs proposed to service those structures and associated support facilities shall be constructed and fully

functional in accordance with the final WQMP approved by the Executive Director.

- e. All structural and non-structural BMPs shall be maintained in a functional condition throughout the life of the approved development to ensure the water quality special conditions are achieved. Maintenance activity shall be performed according to the specifications in Water Quality Management Plan (WQMP) for Brightwater Unincorporated County of Orange, CA Vesting Tentative Tract Map 15460, dated (revised) January 21, 2005, prepared by The Keith Companies. At a minimum, maintenance shall include the following:
 - i. All structural BMPs shall be inspected, cleaned and repaired, as needed prior to the onset of the storm season, no earlier than August 1st or later than October 1st of each year; after every major storm event (greater than 0.75 inch of precipitation); and at least once during the dry season;
 - ii. Should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system and restoration of the eroded area. Should repairs or restoration become necessary, prior to commencement of such repair or restoration work, the applicant shall submit a repair and restoration plan to the Executive Director to determine if an amendment or new coastal development permit is required to authorize such work. If the Executive Director determines that an amendment or a new permit is required to authorize the work, no such work shall begin or be undertaken until it is approved in accordance with the process outlined by the Executive Director;
- f. Impervious surfaces, especially directly connected impervious areas, shall be minimized, and alternative types of pervious pavement shall be used where feasible;
- g. Irrigation and the use of fertilizers and other landscaping chemicals shall be minimized;
- h. Trash, recycling and other waste containers, as necessary, shall be provided in common areas throughout the development. All waste containers anywhere within the development shall be covered, watertight, and designed to resist scavenging animals.
- i. Runoff from all roofs, roads and parking areas shall be collected and directed through a system of structural BMPs including vegetated areas and/or gravel filter strips or other vegetated or media filter devices. The system of BMPs shall be designed to 1) trap sediment, particulates and other solids and 2) remove or mitigate contaminants through infiltration, filtration and/or biological uptake. The drainage system shall also be designed to convey and discharge runoff from the developed site in a non-erosive manner;

- j. Debris and other water pollutants removed from structural BMP(s) during clean-out shall be contained and disposed of in a proper manner;
 - k. Storm drain stenciling ("No Dumping, Drains to Ocean" or equivalent phrase) shall occur at all storm drain inlets in the development.
 - l. Informational signs around the residential development for homeowners and the public about urban runoff and the BMPs used on-site shall be provided at trailheads, and at centralized locations near storm drain inlets.
2. The applicant shall provide in the Final Water Quality Management Plan a description of the design of both the underground media filter system and the catch basin media filters, including the basis for selection of filter media, the expected performance of the media filters, the management, operation and maintenance of the media filter systems and contingency plans if the media filters do not meet performance expectations. The Final WQMP shall be submitted to the Executive Director for approval. 3 The WQMP shall include diversion to the sanitary sewer for dry weather flows, including dry weather between rainstorms during the rainy season. In the event that the applicant cannot secure a long-term (life of the project) agreement with the local sanitary district to accept the dry weather flows, then efficient irrigation including smart sprinkler controllers shall be installed on all landscaped areas of the development.
3. The applicable covenants, conditions and restrictions (CC&R's) shall require that all development be carried out in accordance with the Water Quality Management Plan approved by the Executive Director.

B. Water Quality Monitoring Plan

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for review and approval of the Executive Director, a final revised Water Quality Monitoring Plan, designed to evaluate the effectiveness of the project structural BMPs (both the underground and catch basin media filters) and it shall include a monitoring point at the outlet of the BMPs and prior to the effluent mixing with other runoff or receiving waters.

- 1. Water quality monitoring for the Brightwater Development shall characterize the effectiveness of project structural BMPs (both the underground and catch basin media filters) during at least 3 storms per year over a three year period.
 - a. The monitoring program shall be designed to determine if the two major structural BMPs are performing at least as well as indicated in the WQMP and to demonstrate that the filters are protecting coastal water quality to maximum extent practical at the time of construction.
- 2. The Water Quality Monitoring Plan shall document how the sampling procedures are designed to address the objectives above, including the selection of sampling procedures, the frequency of sampling and sampling locations. The Water Quality Monitoring Plan shall include a map of the

proposed sampling locations, methods of analysis and expected reporting limits.

3. Baseline water quality data of the pre-development conditions of the constituents that will be monitored in the Stormwater Quality Monitoring Plan shall be collected.
 4. Post-development monitoring shall be conducted for a minimum period of three (3) years, following completion of development approved by this permit. Annual reports containing data and analytical assessment of data, shall be submitted to the Executive Director of the Commission and to the Santa Ana Regional Water Quality Control Board for three (3) years after all construction approved by this permit has been completed.
- C. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

17. REVISED TENTATIVE TRACT MAP AND PLANS

- A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the review and approval of the Executive Director, revised tentative tract map and final development plans, approved by the County of Orange, which conform with the requirements of the special conditions of this permit and indicate the final layout of all development including but not limited to lots, grading, streets, utilities and easements, infrastructure, water quality management system, trails, park and recreation facilities, signs, interpretive amenities, habitat restoration, landscaping, and residential and public facilities.

The revised tentative tract map and final development plans shall be modified to include, but not be limited to:

1. Reconfiguration of proposed subdivision such that no separate legal parcel is created on the lower bench of the Bolsa Chica Mesa. The proposed 11.8-acre residual portion of the existing Parcel 2 shown on VTTM 15460 shall be connected to an adjacent parcel that will remain in VTTM 15460. If the developer sells the remaining portion of the lower bench to an entity different from the entity to which the 11.8 acre portion of Parcel 2 is to be sold, a new coastal development permit for a lot line adjustment would be necessary to split off the 11.8 acre portion of the parcel.
2. Revision of the residential lot lines such that the Eucalyptus grove ESHA buffer is a minimum of 328 feet (100 meters) in width as measured from the northern and western boundaries of the Eucalyptus grove ESHA. Revision of the burrowing owl ESHA buffer such that it is a minimum of

- 164 feet (50 meters) in width as measured from the outer edge of the burrowing owl ESHA, as depicted by the applicant on Exhibit 3.
3. Revised public passive recreational signage and interpretive display plans to include interpretive information concerning the area's prehistoric and historic use by Native Americans, including but not limited to its use in Cogged Stone manufacturing and distribution, and archaeoastronomy, and ORA-83's general location and eligibility as a State and National Historic Site due to this significance. The interpretive information must also indicate the presence of the house pits and other significant artifacts that were recovered at ORA-83 and the location of the curation facility where the artifacts may be viewed. The applicant shall submit a detailed signage and interpretive plan including the location and orientation, size, materials, and text of all signs and interpretive displays, consistent with the requirements of the "Public Access and Recreation Improvements and Signage" special condition of this permit. Prior to submittal of the signage and interpretive plan, the plan shall be reviewed by the County of Orange, Department of Beaches Harbors and Parks, the California Department of Parks and Recreation, Office of Historic Preservation, the Native American Heritage Commission, and the Native American group(s) with cultural ties to the area as determined by the Native American Heritage Commission. The applicant shall submit written evidence of submittal of the plan to the named agencies/groups and copies of any comments from the same. The review period shall be no less than thirty days.
 4. Revisions to the proposed rip-rap structure located below the proposed 66-inch stormdrain outlet located on State Lands Commission (SLC) property in the Isolated Pocket Lowland. The rip-rap structure shall be revised such that it is primarily aligned in an east-west "bowl" design, along the existing dirt road below the discharge point, in order to disperse the storm flow over greater spillover area. The revised rip-rap plan shall be submitted to the SLC for review and written approval prior to submittal to the Executive Director.
 5. Submittal of an off-site raptor foraging habitat mitigation plan providing 0.5 acres of native or non-native grasslands for each acre of existing non-native grassland loss on the project site not being planted in native grassland pursuant to the approved final Habitat Management Plan required in Special Condition 10 of this permit. The off-site raptor foraging habitat mitigation plan shall include a monitoring and maintenance plan shall be maintained as mitigation for the life of the project being approved by this coastal permit. No credit shall be given for any native grassland created or preserved on-site that is subject to any fuel modification. The off-site raptor foraging habitat mitigation plan shall be submitted to DFG for their review and approval prior to submittal to the Executive Director. The off-site raptor foraging habitat mitigation area must be owned in fee by the permittee or the permittee must own an

easement over the off-site mitigation area for habitat conservation purposes.

B. The permittee shall undertake development in accordance with the final tract map and development plans, as approved by the Executive Director. Any proposed changes to the approved final tract map or plans shall be reported to the Executive Director. No changes to the approved final plans or tract map shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

18. CONFORMANCE OF DESIGN AND CONSTRUCTION PLANS TO GEOTECHNICAL REPORT

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, quantitative slope stability analyses for the revised grading plan submitted with the current Brightwater development plan. Slope stability analyses, using shear strength parameters supported by direct shear tests undertaken on relatively undisturbed samples collected at the project site, shall be provided for all natural and artificial cut and fill slopes steeper than 2:1 (horizontal to vertical). Recommendations to ensure surficial stability shall also be included.

B. All final design and construction plans, including foundations, grading and drainage plans, shall be consistent with all recommendations contained in AMEC Earth and Environmental, Inc. 2001, "Addendum geotechnical review, revised tract map, vesting tentative tract no. 15460, Brightwater Development Project, Upper Bolsa Chica Mesa, Orange County, California", 29 p. geotechnical report dated 26 September 2001 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267); AMEC Earth and Environmental, Inc. 1997, "Geotechnical evaluation report, Phase I rough grading plans, Vesting tentative tract 15460, Bolsa Chica Mesa, South of Warner/Los Patos Avenues, Orange County, California", 60 p. geotechnical report submitted to the Koll Real Estate Group dated 1 December 1997 and signed by D. Dahncke (GE 2279) and S. T. Kerwin (CEG 1267); and Woodward-Clyde Consultants, 1987, "Evaluation of hazards due to fault surface rupture at Bolsa Chica Mesa and in the Bolsa Chica lowland, Orange County, California", report for Signal Landmark, Inc. and Orange County Environmental Management Agency dated October 1987 and signed by Woodward-Clyde Consultants, as modified as required by additional slope stability analyses for the revised project as required in paragraph A above. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit, for the Executive Director's review and approval, evidence that an appropriate licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is consistent with all of the recommendations specified in the above-referenced

geologic evaluations approved by the California Coastal Commission for the project site.

- C. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

19. ASSUMPTION OF RISK, WAIVER OF LIABILITY AND INDEMNITY

By acceptance of this permit, the permittee acknowledges and agrees (i) that the site may be subject to hazards from bluff retreat, erosion, and earth movement; (ii) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

20. STRUCTURAL APPEARANCE - EXTERIOR BUILDING TREATMENT

All structures, walls and building exteriors that would be visible from the proposed on-site public trail within the native grassland and coastal sage scrub creation and preservation area, the trails within the Bolsa Chica Wetlands, or the trails or interpretive display area within the Bolsa Chica Ecological Reserve shall be finished in earth tones including muted shades of brown, gray and green, with no white, light or bright colors, except as minor accent features. A color palette board shall be submitted for the review and approval of the Executive Director pursuant to this special condition. The color shall be maintained throughout the life of the structure(s).

21. RESIDENTIAL AREA HEIGHT RESTRICTIONS AND HABITAT BUFFER SETBACKS

- A. The heights of residential structures shall not exceed 35 feet above finished grade as shown on the final approved grading plan. Further, the heights of the residential structures that abut the Eucalyptus Grove ESHA buffer and the burrowing owl buffer shall not exceed 26.5 to 31.5 feet above finished grade, as proposed on the "Development Area (DA) 8 Site Plans", prepared by FORMA, dated May 2002, submitted November 6, 2002.

- B. Structures (enclosed) and appurtenant buildings on residential lots shall be setback a minimum of 20 feet from the rear yard property line and shall be consistent with the above height limits. Rear yard walls on the residential lots abutting the Eucalyptus Grove and burrowing owl ESHA buffers shall not exceed a total height of six feet above finished grade shown on the approved final grading plan. The lower two feet of the rear yard wall shall be on concrete material and the upper four feet shall be of plexiglass material. Future development shall conform to these heights and setbacks unless such heights are changed by an amendment to this permit, unless the Executive Director determines that no amendment to this permit is required.

22. FUTURE DEVELOPMENT RESTRICTION

This permit is only for the development described in Coastal Development Permit No. 5-05-020. Pursuant to Title 14, California Code of Regulations, sections 13250(b)(6) and 13253(b)(6), the exemptions otherwise provided in Public Resources Code, section 30610(a) and 30610(b) shall not apply. Accordingly, any future improvements to the single family houses and other structures described in this permit, including, but not limited to, repair and maintenance identified as requiring a permit in Public Resources Code, section 30610(d) and Title 14, California Code of Regulations, sections 13252(a)-(b), shall require an amendment to Permit No. 5-05-020 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government, unless the Executive Director of the Commission determines that no amendment or new permit is required.

23. PROTECTION OF POTENTIAL ARCHAEOLOGICAL RESOURCES DURING GRADING

- A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director an archeological monitoring and mitigation plan, prepared by a qualified professional, that shall incorporate the following measures and procedures:
1. Archaeological monitor(s) qualified by the California Office of Historic Preservation (OHP) standards, Native American monitor(s) with documented ancestral ties to the area appointed consistent with the standards of the Native American Heritage Commission (NAHC), and the Native American most likely descendent (MLD) when State Law mandates identification of a MLD, shall monitor all project grading;
 2. The permittee shall provide sufficient archeological and Native American monitors to assure that all project grading that has any potential to uncover or otherwise disturb cultural deposits is monitored at all times;

3. If any cultural deposits are discovered during project construction, including but not limited to skeletal remains and grave-related artifacts, traditional cultural sites, religious or spiritual sites, or other artifacts, the permittee shall carry out significance testing of said deposits and, if cultural deposits are found by the Executive Director to be significant pursuant to subsection C of this condition and any other relevant provisions, additional investigation and mitigation in accordance with all subsections of this special condition;
 4. If any cultural deposits are discovered, including but not limited to skeletal remains and grave-related artifacts, traditional cultural sites, religious or spiritual sites, or other artifacts, all construction shall cease in accordance with subsection B. of this special condition;
 5. In addition to recovery and reburial, in-situ preservation and avoidance of cultural deposits shall be considered as mitigation options, to be determined in accordance with the process outlined in this condition;
 6. If human remains are encountered, the permittee shall comply with applicable State and Federal laws. Procedures outlined in the monitoring and mitigation plan shall not prejudice the ability to comply with applicable State and Federal laws, including but not limited to, negotiations between the landowner and the MLD regarding the manner of treatment of human remains including, but not limited to, scientific or cultural study of the remains (preferably non-destructive); selection of in-situ preservation of remains, or recovery, repatriation and reburial of remains; the time frame within which reburial or ceremonies must be conducted; or selection of attendees to reburial events or ceremonies. The range of investigation and mitigation measures considered shall not be constrained by the approved development plan. Where appropriate and consistent with State and Federal laws, the treatment of remains shall be decided as a component of the process outlined in the other subsections of this condition.
 7. Prior to the commencement and/or re-commencement of any monitoring, the permittee shall notify each archeological and Native American monitor of the requirements and procedures established by this special condition. Furthermore, prior to the commencement and/or re-commencement of any monitoring, the permittee shall provide a copy of this special condition, the archeological monitoring and mitigation plan approved by the Executive Director, and any other plans required pursuant to this condition and which have been approved by the Executive Director, to each monitor.
- B. If an area of cultural deposits, including but not limited to skeletal remains and grave-related artifacts, traditional cultural sites, religious or spiritual sites, or other artifacts, is discovered during the course of the project, all construction activities in the area of the discovery that have any potential to uncover or otherwise disturb cultural deposits in the area of the discovery and all construction that may foreclose mitigation options or the ability to implement the requirements of this condition shall cease and shall not recommence except as provided in subsection D and other subsections of this special condition. In

general, the area where construction activities must cease shall be 1) no less than a 50-foot wide buffer around the cultural deposit; and 2) no more than the residential enclave area within which the discovery is made.

- C. An applicant seeking to recommence construction following discovery of the cultural deposits shall submit a Significance Testing Plan for the review and approval of the Executive Director. The Significance Testing Plan shall identify the testing measures that will be undertaken to determine whether the cultural deposits are significant. The Significance Testing Plan shall be prepared by the project archaeologist(s), in consultation with the Native American monitor(s), and the Most Likely Descendent (MLD) when State Law mandates identification of a MLD. The Executive Director shall make a determination regarding the adequacy of the Significance Testing Plan within 10 working days of receipt. If the Executive Director does not make such a determination within the prescribed time, the plan shall be deemed approved and implementation may proceed. Once a plan is deemed adequate, the Executive Director will make a determination regarding the significance of the cultural deposits discovered.
- (1) If the Executive Director approves the Significance Testing Plan and determines that the Significance Testing Plan's recommended testing measures are de minimis in nature and scope, the significance testing may commence after the Executive Director informs the permittee of that determination.
 - (2) If the Executive Director approves the Significance Testing Plan but determines that the changes therein are not de minimis, significance testing may not commence until after the Commission approves an amendment to this permit.
 - (3) Once the measures identified in the significance testing plan are undertaken, the permittee shall submit the results of the testing to the Executive Director for review and approval. The results shall be accompanied by the project archeologist's recommendation as to whether the findings should be considered significant. The project archeologist's recommendation shall be made in consultation with the Native American monitors and the MLD when State Law mandates identification of a MLD. If there is disagreement between the project archeologist and the Native American monitors and/or the MLD, both perspectives shall be presented to the Executive Director. The Executive Director shall make the determination as to whether the deposits are significant based on the information available to the Executive Director. If the deposits are found to be significant, the permittee shall prepare and submit to the Executive Director a supplementary Archeological Plan in accordance with subsection E of this condition and all other relevant subsections. If the deposits are found to be not significant, then the permittee may recommence grading in accordance with any measures outlined in the significance testing program.

- D. An applicant seeking to recommence construction following a determination by the Executive Director that the cultural deposits discovered are significant shall submit a supplementary Archaeological Plan for the review and approval of the Executive Director. The supplementary Archeological Plan shall be prepared by the project archaeologist(s), in consultation with the Native American monitor(s), the Most Likely Descendent (MLD) when State Law mandates identification of a MLD, as well as others identified in subsection E of this condition. The supplementary Archeological Plan shall identify proposed investigation and mitigation measures. If there is disagreement between the project archeologist and the Native American monitors and/or the MLD, both perspectives shall be presented to the Executive Director. The range of investigation and mitigation measures considered shall not be constrained by the approved development plan. Mitigation measures considered shall range from in-situ preservation to recovery and/or relocation. A good faith effort shall be made to avoid impacts to cultural resources through methods such as, but not limited to, project redesign, capping, and creating an open space area around the cultural resource areas. In order to protect cultural resources, any further development may only be undertaken consistent with the provisions of the final, approved, Supplementary Archaeological Plan.
- (1) If the Executive Director approves the Supplementary Archaeological Plan and determines that the Supplementary Archaeological Plan's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, construction may recommence after the Executive Director informs the permittee of that determination.
 - (2) If the Executive Director approves the Supplementary Archaeological Plan but determines that the changes therein are not de minimis, construction may not recommence until after the Commission approves an amendment to this permit.
- E. Prior to submittal to the Executive Director, all plans required to be submitted pursuant to this special condition, shall have received review and written comment by a peer review committee convened in accordance with current professional practice that shall include qualified archeologists and representatives of Native American groups with documented ancestral ties to the area. Names and qualifications of selected peer reviewers shall be submitted for review and approval by the Executive Director. The plans submitted to the Executive Director shall incorporate the recommendations of the peer review committee. Furthermore, upon completion of the peer review process, and prior to submittal to the Executive Director, all plans shall be submitted to the California Office of Historic Preservation (OHP) and the NAHC for their review and an opportunity to comment. The plans submitted to the Executive Director shall incorporate the recommendations of the OHP and NAHC. If the OHP and/or NAHC do not respond within 30 days of their receipt of the plan, the requirement under this permit for those entities' review and comment shall

expire, unless the Executive Director extends said deadline for good cause. All plans shall be submitted for the review and approval of the Executive Director.

- F. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

24. CURATION OF ARTIFACTS AND DISSEMINATION OF CULTURAL INFORMATION

PROIR TO ISSUANCE OF THIS PERMIT the applicant shall submit for the review and approval of the Executive Director, evidence of a written agreement with a curation facility that has agreed to accept any artifacts recovered from the project site. Any such artifacts shall be curated within Orange County, at a facility meeting the established standards for the curation of archaeological resources. Further, the applicant shall request in the agreement that the facility receiving the collection prepare an appropriate display of significant materials so that the public can view the investigation results and benefit from the knowledge gained by the investigations.

If permanent curation facilities are not available, artifacts may be temporarily stored at a facility such as the Anthropology Department of the California State University at Fullerton until space becomes available at a facility meeting the above standards. The applicant shall submit written proof of acceptance from the above curation or temporary facility of 100 percent of the recovered artifacts prior to issuance of the permit.

PRIOR TO ISSUANCE OF THIS PERMIT the applicant shall submit, for the review and approval of the Executive Director, a written agreement to distribute the series of ORA-83 Research and Salvage Program Final Reports to interested area institutions, vocational groups and Native American tribal units within Southern California, as well as to appropriate City, County and State agencies, as proposed in the "Archaeological Research Design ORA-83: "The Cogged Stone Site" Final Research and Salvage Program", by Scientific Resource Surveys, Inc., dated November 11, 1983 and conditioned in coastal development permit 5 89-772, as amended.

25. OTHER AGENCY APPROVALS

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall provide to the Executive Director a copy of a permit, or letter of permission, or evidence that no permit or permission is required for the project subject to this coastal development permit, issued by the following entities: County

of Orange; City of Huntington Beach, California Department of Fish and Game; U.S. Fish and Wildlife Service; Regional Water Quality Control Board; Orange County Fire Authority; Orange County Sanitation District and the State Lands Commission. The applicant shall inform the Executive Director of any changes to the project required by the cited entities. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

26. COMPLIANCE

All development shall occur in strict compliance with the proposal as set forth in the application for permit, subject to any changes approved in this permit and subject to any approved revised plans provided in compliance with the Commission's special conditions and any other special conditions noted above. Any proposed change from the approved plans must be reviewed and approved by the Executive Director to determine if an amendment or new permit is necessary.

27. INSPECTIONS

The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. DESCRIPTION OF PROPOSED PROJECT AND PROJECT SITE

Bolsa Chica Mesa is made up of a lower bench and an upper bench (also referred to as the lower mesa and upper mesa) separated by a gentle slope. The upper bench is located adjacent to and south of Los Patos Avenue and west of Bolsa Chica Street in the unincorporated area of Bolsa Chica, County of Orange. Although the majority of the upper bench (105.3 acres) is located within the unincorporated Bolsa Chica area of Orange County, approximately 0.95 acres in the northeasterly corner of the Brightwater development is located within the corporate boundaries of the City of Huntington Beach (Exhibit 1). Huntington Beach has a certified Local Coastal Program. Therefore, the City of Huntington Beach would be the agency to which the applicant must file a coastal development permit application for these nine homes. The site is surrounded on the north (across Los Patos Avenue) and northeast by (the Sandover development in the City of Huntington Beach) residential development, the Goodell property and Bolsa Chica Street;

on the southeast by the Shea Homes property (the pending Parkside Development located in the City of Huntington Beach) and the existing concrete lined East Garden Grove-Wintersburg (EGGW) Flood Control Channel; on the south by the now State-owned Bolsa Chica lowlands; and on the west by the approximately 120 acre lower bench of the Bolsa Chica Mesa and beyond the lower bench, the 306 acre Bolsa Chica Ecological Reserve owned by the State Lands Commission and managed by the California Department of Fish and Game, Pacific Coast Highway, Bolsa Chica State Beach and the Pacific Ocean (Exhibit 2).

The proposed Brightwater development is located primarily on the 105.3-acre upper bench. The applicant owns approximately 103 acres on the lower bench of the Bolsa Chica Mesa, with the Ocean View School District owning 15 acres and the State Lands Commission owning the remainder of the lower bench as part of the upland portion of the Bolsa Chica Ecological Reserve. Although the applicant has indicated that their 103-acre lower bench holdings are not a part of the development proposal, some development is actually proposed for the lower bench, namely, the creation of an 11.8 acre separate legal parcel through the proposed subdivision. Upper bench development consists of a subdivision into 349 single-family residential lots, passive public recreation, open space and habitat conservation areas are also proposed.

Overview of Brightwater Development Project

Subdivision Proposal

The subject coastal permit application is to subdivide and develop the upper bench of the Bolsa Chica Mesa with a 349-unit residential community. The upper bench, approximately 105.3 acres in size, is primarily one legal parcel comprised of a portion of Parcel 2 of Certificate of Compliance No.CC 92-01, but also includes an 8.2-acre parcel of land formerly owned by Metropolitan Water District. However, Parcel 2 extends down the slope separating the upper and lower benches and includes approximately 16 acres of land on the lower bench and the Lowlands (Exhibit 5). The lower bench is approximately 20 - 30 ft. above the adjacent Bolsa Chica Lowlands containing the Bolsa Chica wetlands. Approximately 5 of the 16 acres of Parcel 2 are located within the Lowlands (at or below 5 MSL) and the remainder, 11.8 acres is located on the lower bench. The Lowland portion of Parcel 2 was sold to the State of California in 1997 when the applicant sold its holdings within the Lowlands to the State for wetlands restoration purposes. Therefore the remaining portion of Parcel 2 that is subject to the proposed subdivision through the approval of VTTM 15460 is 11.8 acres in size and located on the lower bench (Exhibit 5).

Under the proposed vesting tentative tract map (VTTM) 15460 the applicant is requesting to separate this 11.8-acre lower bench portion from the larger upper bench portion of the existing Parcel 2 and create a "residual" parcel on the lower bench. Staff incompleted the initial coastal development permit application for the proposed development in December,

2002 for several items, including the applicant's plans concerning the lower bench³. Staff noted in the letter to the applicant that all previous evaluations of the biological resources, potential impacts and planning efforts for the Bolsa Chica Mesa included both the upper and lower benches of the Mesa. The applicant's response was that there were no plans, at the present time, for the lower bench. Staff further noted that the creation of this 11.8-acre residual lot is a division of land that constitutes development under Section 30106 of the Coastal Act. Thus, the application does include development on the lower bench, and the creation of a new parcel requires an explanation of the plans for that parcel. Initially the applicant was proposing to also translocate Southern Tarplant from the upper bench, within the proposed residential development footprint, to the lower bench. However, the applicant has now revised this application to eliminate any translocation of tarplant to the lower bench. Although the applicant is no longer proposing to translocate Southern Tarplant onto the lower bench, the proposed project would still involve development, as defined by Section 30106 of the Coastal Act, with the creation of the 11.8-acre parcel. All development in the coastal zone, unless it is otherwise exempt, must be approved by the Coastal Commission, since the local government has no certified LCP for this area. Despite the applicant's contention that none of the lower bench is before the Commission in the subject application, the Commission disagrees with this statement. Therefore, the proposed lower bench development is being analyzed under this application as it was approved by the local government in the approval of VTTM No. 15460 and is included in the application submittal to the Commission.

Residential Community

The proposed Brightwater residential community is a 349-unit development on approximately 68 acres of the 105.3-acre project site. The community is planned at medium-low density (6.5-12.5 DU/Ac), although the actual density within the development subareas range from 4.0 to 8.2 dwelling units per acre. The average community density is only 5.4 DU/Ac. The community design concept is that of a New England coastal village with six styles of single-family housing types and sizes. The four larger single-family home types have lots ranging from 5,000 to 6,500 square feet and homes ranging from 2,200 to 4,200 square feet. There will also be smaller units constructed as planned unit developments using reciprocal easements (zero lot lines) and other integrated site planning techniques but are detached single family residential units. The smaller styled developments have lots that are approximately 3,000 sq. ft. and the homes range from roughly 1,500 to 1,900 sq. ft. All units range from 3 to 5 bedroom floor plans with one product type having as few as two bedrooms. None of the units will exceed 35 feet in height and most will be at 28 - 32 ft. high. Project grading consists of 220,000 cubic yards of cut and 220,000 cubic yards of fill. The two areas receiving the greatest cut are the high point near Warner and Los Patos and the central bluff area where the applicant will be

³ The initial coastal development permit application that was submitted on November 6, 2002 was application 5-02-375. The applicant provided Commission staff with the requested additional information in several separate submittals over an extended period of time. The application was finally filed on September 24, 2003.

removing the earthen mound and the temporary stockpile of crushed concrete that was constructed with remnants of the two World War II bunkers and water cistern under coastal development permit 5-90-1143, approved on September 13, 1991.

At the northeast corner of the Brightwater project site is the boundary between the City of Huntington Beach and the unincorporated Orange County area. The boundary cuts diagonally between the Brightwater site and the recently completed Sandover development in Huntington Beach (Exhibit 3). One of the project goals is to integrate the two communities. Three of the lots approved under the VTTM 15460 will be annexed to the City and combined with three of those lots. As a result of the annexation and vacation of the existing entry into the Sandover development the potential for nine additional lots exist. Annexation and construction of any development in the City of Huntington Beach is not authorized under the subject coastal development permit. The City will handle development within the City of Huntington Beach as the certified Huntington Beach LCP covers the area.

Public Recreational Amenities

At the western and southern edges of the Brightwater development project are Planning Areas 3A and 3B, which together constitute the 34.2-acre upland habitat restoration and preservation area, located along the gentle slope between the upper and lower benches and on the southeastern bluff face of the upper bench of the Bolsa Chica Mesa (Exhibit 3). The upland habitat restoration and preservation area includes the existing 5-acre Eucalyptus grove along the southeastern bluff. The existing 0.41-acre "pocket wetland" is also within the habitat park and will be preserved in place and provided with a 100 ft. wetland buffer. Protective fencing will be placed around the Eucalyptus ESHA and the existing wetland. Split rail fencing will be on the bluffward side of the trail. The passive habitat park will be planted with native grassland and coastal sage scrub and coastal bluff scrub vegetation. Within the park will be a 6 foot wide decomposed granite pedestrian trail, interpretive signage, and rustic seating along the trail. Once constructed, the upland habitat park will be dedicated to the County of Orange or other public agency or non-profit group for public access and conservation purposes.

Other community facilities include a 1.2 million gallon underground water storage reservoir as well as an above ground domestic water pump station including two fire pumps. A temporary on-site groundwater well will be constructed and used during grading and construction operations. The temporary well will be abandoned once the permanent underground reservoir is completed. As detailed in Section D. of this staff report, the Orange County Fire Authority (OCFA) requires initial and on-going fuel modification to protect the future homes within the 34.2-acre area proposed for habitat restoration and preservation.

Site Description

The approximately 225-acre Bolsa Chica Mesa is only one portion of the Bolsa Chica LCP area. On the opposite end (to the south) of the LCP area is the Huntington Mesa, including the proposed Harriett Wiedner Regional Park. The County of Orange began its LCP planning activities in 1977, segmented the area within its coastal zone jurisdiction into four segments with 12 geographic subareas or segments, the Bolsa Chica area being one of those segments. The Bolsa Chica LCP area is comprised of approximately 1,588 acres of unincorporated land within the coastal zone of northwestern Orange County. Currently, the land exists predominantly as open space containing both upland and wetland habitat. The Bolsa Chica and Huntington mesas rise some 50 feet above the lowlands and are open space areas consisting primarily of non-native grasslands. However, they are a very important component of the Bolsa Chica ecosystem. An extensive wetland area located between two upland mesas to the north (Bolsa Chica Mesa) and south (Huntington Mesa) dominates the site. The Pacific Coast Highway, Bolsa Chica State Beach, and the Pacific Ocean border the western side, while urban development occurs to the northeast. The Bolsa Chica wetlands were formerly part of an extensive coastal lagoon/salt marsh system, which was estimated to cover 2,300 acres in 1894 by the U.S. Fish and Wildlife Service. Today, substantial portions of the wetland habitat remain in the lowland area.

Bolsa Chica is a unique place along the California coast. Bolsa Chica has undergone substantial degradation caused by human interference with its natural wetlands processes commencing in the 1800's. Bolsa Chica has been used for a variety of purposes over the years, most notably for on-going oil and gas production since the 1930's. Beginning in the 1960's and continuing through the late 1980's, it became increasingly recognized that the wetlands at Bolsa Chica were in need of major restoration. Initially restoration was proposed to be achieved through construction of a new ocean inlet in conjunction with a marina (boating facility).

Over the past century, Bolsa Chica has been affected by urban, recreation, and oil-related development. Three state oil leases occur within the lowlands, which currently support 331 oil wells (active and inactive), related oil facilities, and improved and unimproved roadways. Although development has markedly changed Bolsa Chica, the area currently contains substantial and important natural resource values. The Bolsa Chica Lowlands contains one of the largest remaining coastal wetlands in southern California.

Although a good portion of the wetlands is now degraded due to oil production, road construction and flood control, tens of thousands of birds use Bolsa Chica Lowlands every year, including six endangered or threatened species. Up until 1997, the majority of the lowlands were in private ownership. However, in 1997, the State of California acquired 880 acres of the lowlands for the purpose of carrying out a comprehensive wetlands restoration, including a new ocean inlet. The Ports of Los Angeles and Long Beach are providing funding for the wetland restoration.

The Bolsa Chica Mesa has also been subject to various activities and development over the years, including cattle and sheep grazing and other agricultural activities, hunting and the construction of the Bolsa Chica Gun Club in the 1890's, oil exploration including the

construction of numerous oil wells and pipelines and the construction of numerous roads that crisscross the mesa, military use with the construction of two gun emplacements or bunkers during World War II, and a borrow site for surrounding urban development. At the southern edge of the lower and upper benches of the Bolsa Chica Mesa is a continuous grove of Eucalyptus trees, planted by the property owner in the early 1900's to serve as a windbreak. Although Eucalyptus trees are not native to the area, they serve a vital biological role in the wetland/upland ecosystem. The Eucalyptus grove totals approximately 20 acres on both benches, 5 acres being on the upper bench. It is recognized by the Department of Fish and Game as an environmentally sensitive area and has been recognized by the Coastal Commission and the courts as an environmentally sensitive habitat area or ESHA, as defined by the Coastal Act. Further inland from the Bolsa Chica Mesa bluff edge are grasslands that are used by both birds and land mammals, including, but not limited to, the burrowing owl, for foraging.

B. PLANNING HISTORY

The planning effort for the Bolsa Chica segment of the County of Orange Local Coastal Program is long and controversial. Although the subject application is the third⁴ substantial coastal development permit application to the Coastal Commission for permanent development on the Bolsa Chica Mesa, the Commission's first consideration of the Bolsa Chica Local Coastal Program (LCP) began in 1982. Despite the Commission's numerous actions on the Bolsa Chica LCP throughout this twenty-year period, no LCP has ever been fully certified.

The Bolsa Chica LCP planning area is approximately 1,588 acres in size. The planning area is flanked on the north by Warner and Los Patos Avenues and the Bolsa Chica Mesa and on the south by the Huntington Mesa and Seapoint Street⁵. Between the two mesas is the 1,300-acre Bolsa Chica Lowland. The Pacific Ocean (Bolsa Chica State Beach) borders the western side of the planning area with residential development in the City of Huntington Beach on the east. The lowlands are primarily historic and currently functioning wetlands interspersed with former wetlands that are utilized for oil production activities (pads and roads) and upland areas that are Environmentally Sensitive Habitat Areas. The 306-acre Bolsa Chica Ecological Reserve, including Inner and Outer Bolsa Bay, are managed by the California Department of Fish and Game. The East Garden Grove-Wintersburg (EGGW) Flood Control Channel, maintained by Orange County Flood Control District, is also within the Bolsa Chica lowlands. The flood control channel empties into Outer Bolsa Bay.

⁴ The current application, 5-05-020 is the third application for the proposed Brightwater development. The two previous applications were submitted in November 2002 (5-02-375) and May 2004 (5-04-192). Both applications were withdrawn but proposed similar residential and passive park development as earlier versions of the subject Brightwater development proposal.

⁵ Approximately 10 acres of the Huntington Mesa and Seapoint Street are within the City of Huntington Beach.

The Commission's first approval of the Bolsa Chica Land Use Plan (LUP) occurred in November 1984. On October 23, 1985, a revised land use plan was adopted which would have allowed for intensive development of the area including 75 acres of mixed-use marina/commercial, a 150 room motel, 500 acres of high density residential development, a navigable tidal inlet, an arterial roadway through the Bolsa Chica Wetlands (the Cross-Gap Connector), and 915 acres of wetland restoration. The amount of wetland fill that would have occurred under this LCP was not specified. This controversial LUP was never fully certified.

In June 1995, the County of Orange submitted an amended proposal of the Bolsa Chica Local Coastal Program (LCP) for Commission certification. As submitted in 1995, the Bolsa Chica LCP would have allowed 2,400 units on the upper and lower benches of the Bolsa Chica Mesa, and up to 900 residential units in the Lowlands for a total of 3,300 residential units. The Lowland development would have resulted in the fill of 120 acres of wetland and the elimination of 65 acres of ESHA that was interspersed between the wetlands. The major property owner was required to fund the restoration of 770 acres of adjacent wetlands and dedicate the restored wetlands to a public agency, as mitigation for the wetland impacts. Public access and recreational facilities included a public loop road ("mesa connector road") on the Bolsa Chica Mesa, active and passive parks on both the Bolsa Chica Mesa and in the Lowlands, 100 public parking spaces on the Bolsa Chica Mesa and 60 public parking spaces in the Lowlands, pedestrian and bicycle trails on the mesas and in the Lowlands, a 4-acre kayak/conoe/beach facility on the inland side of PCH, and the optional provision of 10 acres of neighborhood commercial use on the Bolsa Chica Mesa. Fifty-eight acres of land on the Huntington Mesa was to also be dedicated to the County of Orange for the Harriet Wiedner Regional Park. Development on the Bolsa Chica Mesa would have eliminated Warner Pond, a 1.7-acre wetland located on the lower bench. Additionally, the Eucalyptus grove on the Bolsa Chica Mesa was to be relocated onto the Huntington Mesa in order to accommodate the build-out of the Bolsa Chica Mesa. The Commission approved this amended version of the Bolsa Chica LCP on January 11, 1996. The Commission's decision became the subject of a lawsuit.

The trial court determined on June 4, 1997 that the Commission's approval of the Bolsa Chica LCP was deficient in two respects. First, that Section 30233 of the Coastal Act does not allow the fill of wetlands for residential purposes. Second, that the Warner Pond wetland was an environmentally sensitive habitat area (ESHA) and that the Commission failed to explain how such an ESHA could be filled consistent with Section 30240 of the Coastal Act. The trial court remanded the Bolsa Chica LCP to the Commission. The Commission reheard portions of the proposed Bolsa Chica LCP on October 9, 1997. The Commission limited its review to those aspects of the case on which the court had remanded.

At the Commission's October 9, 1997 meeting, significant revisions were made to the Plan as originally submitted in June 1995. The Commission found in October 1997 that the fill of wetlands for residential development was not an allowable use and denied the development proposed in the lowland area. Residential development of the upper and

lower benches of the Bolsa Chica Mesa was also scaled back to 1,235 residential units to avoid the widening of Warner Avenue which necessitated the fill of Warner Pond. Since lowland residential development was denied, the proposed wetland restoration mitigation project was also deleted from the Bolsa Chica LCP since it was to be funded by the developer through the lowland residential development. Furthermore, the wetland restoration program became moot since the majority of the lowland (880 acres) was acquired by the State of California, thus becoming public trust lands. The State and Federal governments have a Coastal Commission approved wetland restoration program covering 1,247 acres of the lowland. On November 13, 2001, the Commission approved Consistency Determination No. CD-061-01 (U.S. Fish and Wildlife Service) for the major wetland restoration project.

The Commission's October 9, 1997 decision on remand was again reviewed by the courts under the original challenge to the Commission's 1996 approval of the Bolsa Chica LCP. On April 16, 1999, the appellate court upheld the trial courts findings, added a new finding and remanded the Bolsa Chica LCP back to the Commission. The new finding of the appellate court was that the relocation of the Eucalyptus grove from the Bolsa Chica Mesa to the Huntington Mesa was not allowed under Section 30240 of the Coastal Act. To comply with the appellate court's remand, the Commission once again re-heard the Bolsa Chica LCP on November 11, 2000. The Commission certified the LCP again, with suggested modifications that were significantly different from the previous suggested modifications.

In the Commission's 2000 approval, it again limited the number of residential units on the Bolsa Chica Mesa to a maximum of 1,235 to avoid the filling of Warner Pond. However, the Commission further required that all future development be concentrated on the upper bench of the Bolsa Chica Mesa adjacent to existing residential development and that the entire lower bench (with the exception of a 10 acre school site adjacent to Warner Avenue) be designated for conservation and preserved through an open space deed restriction. The Commission found that in order to be most protective of the resources that development of the Bolsa Chica Mesa must be confined to the upper bench of the mesa, in close proximity to existing development, to conserve all of the resources of the lower bench in a manner that is more protective overall of significant coastal resources, than protecting each specific habitat area in conjunction with development of the entire Bolsa Chica Mesa.

The Commission also required that the Eucalyptus grove ESHA remain intact and protected on the Bolsa Chica Mesa and that it not be relocated to the Huntington Mesa, as was previously proposed and approved under the earlier LCP. To protect the portion of the Eucalyptus ESHA located on the upper bench, the Commission required that all future residential development be set back a minimum of one hundred feet from either the inland edge of the grove or the inland edge of the bluff, whichever is the greatest distance. The Commission's 2000 action on the LCP further required that future development of the portion of the upper bench that overlooks the lower bench was required to be set back fifty feet from the upper edge of the slope separating the two benches. Other significant

suggested modifications contained in the Commission's 2000 action included the prohibition of storm water discharges directly into Outer Bolsa Bay or other wetland area; the provision of a scenic public loop road allowing public parking on both sides, immediately landward of the buffer and paralleling the portion of the upper bench that overlooks the Lowlands; and the protection of cultural resources by requiring that a Native American monitor also be present during all grading operations.

The Commission's November 2000 action was unacceptable to the County of Orange and the landowner. In May 2001, the County notified the Commission that it would not be adopting the Commission's suggested modifications. Therefore, the Commission's certification of the LCP lapsed six months after its action. Therefore the standard of review for the currently proposed development remains the Chapter 3 policies of the Coastal Act since there is no certified LCP for the Bolsa Chica area of the County of Orange.

C. COMPARISON OF THE PROPOSED PROJECT WITH THE COMMISSION'S 2000 BOLSA CHICA LOCAL COASTAL PROGRAM ACTION

During consideration of the Bolsa Chica LCP in November 2000, the Commission approved 100-ft. and 50-ft. buffers around sensitive habitats on the upper bench. Although the buffers were limited, the reduced buffers were accepted in the context of balancing some resource impacts against benefits that could be derived from the concentration of development on the upper bench that allowed the enhancement of biological productivity and marine resources and the protection of a contiguous block of habitat through the placement of an open space easement over the entirety of the lower bench of the Bolsa Chica Mesa. This balancing approach was only possible because the Commission had the entire Bolsa Chica Mesa before it given that they were acting on an LCP amendment that included all of the area within the Bolsa Chica LCP Area. The current situation is qualitatively different because the applicant has, for the most part, excluded the lower bench from consideration.

The Commission approved the Bolsa Chica Local Coastal Program (LCP) with suggested modifications on November 16, 2000. Following Commission action the County of Orange informed the Commission that the suggested modifications were unacceptable, and they were not adopted by the Board of Supervisors. Therefore, pursuant to sections 13537(b) of the Commission's regulations, the Commission's certification of the LCP has lapsed and is no longer of any legal effect. Although the certification of the LCP has lapsed, making the standard of review the Chapter 3 policies of the Coastal Act, the Commission can still look at its 2000 action on the Bolsa Chica LCP as an example of one set of LCP provisions and a development scenario the Commission found to be consistent with the Chapter 3 policies of the Coastal Act.

The applicant has asserted that the October 2004 project was designed using the 2000 Bolsa Chica LCP as guidance and further states that the previously proposed Brightwater development was consistent with the 2000 LCP as approved by the Commission with

suggested modifications. The current application submitted in January 2005 is very similar to the October 2004 Brightwater project. As discussed in the above Executive Summary, the current application has been revised to eliminate the prohibition on public vehicular access into and parking within the community, eliminate the “restoration fill” at the bluff edge as well as the Bolsa Chica Road extension and 30-space public parking lot encroachments into the Eucalyptus ESHA, and eliminate the Southern Tarplant translocation and impacts with the elimination of the water quality features on the slope. However, a comparison of the proposed project against the standards the Commission imposed in its action on the recent Bolsa Chica LCP demonstrates that the proposed Brightwater development project differs greatly from the Commission's 2000 action, in a number of significant ways.

FEATURE	2000 LCP AS APPROVED	PROPOSED PROJECT WITH SUGGESTED MODS
Bolsa Chica Mesa Land Area Covered	Entire Upper Bench; Entire Lower Bench	Entire Upper Bench; 11.8 ac of 103 ac ownership on the lower bench.
Land Use of Lower Bench	Except for the 10-acre school site depicted as Public Facility on Fig.2.1-2, the lower bench of the Bolsa Chica Mesa shall be designated Conservation. The Eucalyptus Grove ESHA and the Warner Ave. Pond ESHA shall be preserved. (Portion of County Policy 3.1.2.4, page 60 of Exhibit 21)	Land use of 11.8-acre residual parcel created by VTTM 15460 is unknown given the uncertainty of the pending sale of the lower bench. The remaining 91.2 acres of the applicant's ownership of the lower bench is expressly not included in this application.
Size and Measurement of ESHA Buffer	The buffer on the Bolsa Chica Mesa upper bench overlooking the lowland shall extend inland one-hundred feet ⁶ from either the Eucalyptus grove ESHA or the edge of the top-of-bluff,	The applicant is proposing a varied width buffer ranging from 100 to 332 ft between the nearest Eucalyptus tree and the edge of the proposed 50 ft. wide fuel modification Zone B. Because the lower

⁶The adopted findings of the LCP, dated November 27, 2000, pages 251 – 262 and the attached memo from Dr. John Dixon, staff ecologist, indicate clearly that the ESHA buffer was being reduced to 100 feet, as opposed to 100 meters, in order to concentrate development on the upper bench since a conservation easement was required to be placed on all areas of the lower bench that were owned by the landowner/master developer of the upper bench, as required by County Policy 3.1.2.6 and other LCP policies.

	<p>whichever is the greatest distance. The buffer separating the lower bench from the upper bench shall extend from the top edge, fifty-feet into the upper bench. (Portion of County Policy 3.1.2.6, page 64 of Exhibit 21).</p>	<p>bench is not before the Commission there is no shifting of development from the lower bench to the upper bench to justify the reduced buffer. The greater width buffer is measured from the edge of the Eucalyptus grove. However, the existing edge of the top-of-bluff is landward of the Eucalyptus grove. Using the existing edge of the top-of-bluff would provide for a wider, more protective buffer, as required by the LCP Policy 3.1.2.6. Using the more protective measurement from the existing bluff edge, the buffer is only 50 ft wide.</p>
<p>Development Adjacent to ESHA (within ESHA buffers) or Park and Recreation Areas</p>	<p>Development in areas adjacent to ESHAs and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas. (New Policy 6, page 61 of Exhibit 21)</p>	<p>Initially, the proposed Eucalyptus grove buffer was 150 to 382 ft. wide, as measured from the edge of the grove. However, because OCFA requires that the 50 ft. area closest to the future homes be permanently irrigated to protect them from fire damage, the applicant has reduced the ESHA buffer by 50 ft. Because permanent irrigation to support adjacent residential use is not a use based on the needs of the habitat buffer, the applicant has simply reduced the width of the habitat buffer.</p>

As demonstrated in the table above, the proposed Brightwater development project is not consistent with the Commission's action on the 2000 LCP with regards to: failure to include the applicant's lower bench holdings (with the exception of a proposed 11.8-acre remainder parcel being created by the proposed subdivision) in the coastal development permit application in conjunction with the consideration of development on the upper

bench and thus no offer of dedication of a conservation easement over the lower bench is included as a part of this application; Eucalyptus ESHA buffer is not being measured in the most protective manner (from the top of bluff edge) and is further reduced from one-third the size of the staff recommended 100 meter buffer down to only 50 ft. from the top of bluff and does not include a conservation easement over the lower bench as a part of this coastal development permit application. Although the 2000 LCP did not specifically recognize the burrowing owl habitat as ESHA, one of the Commission's suggested modifications (new Policy 6) required that development in areas adjacent to ESHAs be sited and designed to prevent impacts that significantly degrade the ESHA and that development allowed adjacent to the ESHA be compatible with the continuance of the habitat area.

Although the proposed Brightwater development project is not consistent with what the Commission approved with respect to the 2000 LCP as demonstrated in the above table, that fact in and of itself is immaterial. For one thing, there are undoubtedly multiple approvable ways to structure development on the Bolsa Chica Mesa. Moreover, the standard of review for this project proposal is the Chapter 3 policies of the Coastal Act, not the Commission's previous action, which has expired and is of no legal force or effect. However, the comparison of the proposed project with the most recent LCP action for the area is a useful exercise since the Commission in its action on the LCP found that a project designed to be consistent with the policies of the LCP, as approved with suggested modifications, would also be consistent with the Chapter 3 policies of the Coastal Act. In addition, the applicant has asserted that its current proposal is consistent with the Commission's 2000 LCP action.

D. BIOLOGICAL RESOURCES

Although 82.6 acres of the 105.3-acre Brightwater development project site (78%) is dominated by non-native annual grasslands and ruderal communities, the upper bench of the Bolsa Chica Mesa is adjacent to a non-native "Eucalyptus" grove that has been designated an Environmentally Sensitive Habitat Area by the California Department of Fish and Game and the Coastal Commission and recognized as such by the courts; and Southern Tarplant and coastal bluff scrub communities that were designated Environmentally Sensitive Habitat Areas by the Commission in the 2000 Bolsa Chica Local Coastal Program, and two important freshwater wetlands. These native and non-native communities combine to make the Bolsa Chica Mesa ecologically valuable. The mesa and its associated bluffs provide habitat for over 88 species of land birds, including some 33 resident species, 38 migrants, 15 wintering species and 3 summering species. Reptiles and at least ten species of mammals also utilize the Bolsa Chica Mesa.

The Bolsa Chica Mesa must also be viewed in the larger context of its role in the upland/wetland ecosystem. According to both the California Department of Fish and Game and the U.S. Fish and Wildlife Service, the Bolsa Chica Mesa and the lowland wetlands are biologically interdependent. Together with the Bolsa Chica wetlands, a part of the roughly 1,300 acre Bolsa Chica Lowlands, the mesa communities which include both the Bolsa

Chica Mesa and the Huntington Mesa to the south of the Lowlands, combine to make this area an important upland-wetland ecosystem. These biological interdependencies are vital to maintaining biological productivity and diversity. However, it must also be recognized that over the years, this resource area has declined due to human impacts and development pressures. Commission staff ecologist, Dr. John Dixon, summarizes the declining, but still valuable, overall ecological condition of the greater Bolsa Chica area in a July 15, 2004 memo on the October 2004 Brightwater Development Project in this way:

"The Bolsa Chica wetlands once covered over 30 square miles and, on the Bolsa Chica and Huntington Mesas, were bounded by coastal sage scrub communities that interacted ecologically with the wet lowlands. Although the wetlands have been reduced to less than two square miles and the adjoining mesas have been substantially developed and the remaining open space much altered, the U. S. Fish and Wildlife Service in 1979 nonetheless identified the Bolsa Chica ecosystem as "one of the last remaining viable wetland-bluff ecosystems in southern California." This viewpoint was echoed by conservation biologists over twenty years later: "...Bolsa Chica is one of the last remaining areas in coastal southern California with a reasonably intact upland-wetland gradient, which is of high ecological importance and generally lacking in representation in reserves in the region." In nearly all other coastal marsh ecosystems in southern California, the upland components have succumbed to urban development. Uplands provide pollinators for wetland plants, nesting and denning sites for avian and mammalian predators that forage in wetlands, important alternative prey populations for many of those predators, and critical habitat for primarily upland species. Many species have life-stages that rely on both wetland and upland habitats ... [citations omitted]

Dr. Dixon's memo can be found in its entirety as Exhibit 28 to this staff report and is incorporated herein by reference. Due to the special communities of the Bolsa Chica Mesa, many areas of the mesa have previously been determined to constitute environmentally sensitive habitat areas, as defined by and protected by the Coastal Act, or, if not previously so recognized, nevertheless qualify as such. The Coastal Act defines environmentally sensitive habitat areas or environmentally sensitive areas as:

Section 30107.5

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Further, Section 30240 of the Coastal Act requires that land resources that constitute environmentally sensitive areas or environmentally sensitive habitat areas as defined by Section 30107.5 be protected by allowing only resource dependent uses within those areas. Additionally, development adjacent to environmentally sensitive areas and parks and recreation areas must be sited and designed such that the adjacent development will

not degrade the habitat or recreation values of the sensitive resource. Finally, uses adjacent to environmentally sensitive land resources and park and recreation areas must be compatible with the continuance of the resource area. Coastal Act Section 30240 states:

Section 30240

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In the November 2, 2000 Commission staff report concerning a proposed amendment to the Bolsa Chica Local Coastal Program the following Environmentally Sensitive Habitat Areas (ESHA) were identified: (1) the Eucalyptus grove on and along the edge of both the upper and lower bench of the Bolsa Chica Mesa; (2) Warner Pond, located on the lower bench, a marine habitat connected by culvert to Huntington Harbor; (3) the natural habitats within the California Department of Fish and Game Ecological Reserve along the western edge of the lower bench of the Bolsa Chica Mesa; (4) the coastal sage scrub community; (5) habitat of the southern tarplant throughout the mesa; and, (6) the degraded wetlands in the lowlands that are part of a restoration plan. The Eucalyptus trees, Warner Pond, and the Ecological Reserve were generally depicted, the locations of the other ESHA types were not mapped.

There has been no change in circumstances in the intervening four years that would cause the removal any of these habitats from the recommended list of environmentally sensitive habitat areas on or adjacent to the Bolsa Chica mesa. Thus the Commission finds these areas to constitute ESHA. The only exception to this is that, as described below, the ESHA delineation for the Eucalyptus grove is being modified to more precisely reflect the nature and extent of that ESHA. In addition to the abovementioned habitats, the upper bench of the Bolsa Chica Mesa contains two small but functioning wetlands: the 0.2 acre Los Patos seasonal wetland (referred to as "seasonal pond" by the applicant), located near Los Patos Avenue and the 0.06 acre "pocket wetland" located in the central slope/bluff edge area (Exhibit 20, Figure 1). The Los Patos wetland is a seasonally ponded depression, dominated by herbaceous vegetation, including the rare Southern Tarplant. The "pocket wetland" is a small borrow pit dominated by a stand of willows and mulefat with very little understory vegetation. These wetlands are protected under Section 30233 of the Coastal Act and only certain enumerated uses are allowed. Moreover, even those uses can only be implemented if no less environmentally damaging feasible alternative exists, and if feasible mitigation measures are provided. However, these freshwater wetlands do not constitute ESHA as defined above. The proposed Brightwater development project however does not propose to fill these wetlands but will retain them in

place with a 100-foot wetland buffer. Special Condition 10, the final Habitat Management Plan, requires the proposed 100-foot wetland buffer to be implemented. This wetland buffer is consistent with numerous past Commission actions to protect wetlands from the effects of adjacent development. However, care must be taken during grading and construction to assure that impacts to the wetlands are avoided. Special Condition 9, Construction Staging Area and Fencing, assures that the wetlands and all habitat areas are protected during grading and construction.

Another habitat of the Bolsa Chica Mesa that was not identified as ESHA in the Commission's previous actions on the Bolsa Chica LCP is that of the burrowing owl. The burrowing owl is considered a California Species of Special Concern by the Department of Fish and Game. Burrowing owls use the Bolsa Chica grassland and ruderal habitats as well as abandoned burrows of rodents or other small mammals. In the winters of 2001-2002 and 2002-2003, the applicant's biologist documented use of specific areas of the mesa by this owl (Exhibit 17a). The characteristics of the burrowing owl habitat, its ESHA status on the Bolsa Chica Mesa, and the proposed project impacts are detailed below.

The proposed residential development project will significantly impair the biological productivity of the upper bench of the Bolsa Chica Mesa, and indirectly impact the adjacent lowland wetlands. Adverse impacts from residential development include: disturbances to wildlife, including raptors from human activity and disruptive noise due to the inadequate buffer adjacent to the Eucalyptus tree ESHA; improper use of undersized Eucalyptus ESHA and Burrowing Owl ESHA buffers for residential fuel modification; encroachment into the Burrowing Owl ESHA buffer for the construction of residential lots; and the unmitigated loss of 68 acres of raptor foraging habitat (non-native grasslands and ruderal vegetation) that is utilized by several California Species of Special Concern (CSC). The Brightwater development project features and their impacts to the various ESHA sensitive land resources of the upper bench of the Bolsa Chica Mesa and adjacent Lowlands are detailed below.

1. Delineation of the Eucalyptus Tree ESHA and the ESHA Buffer

Eucalyptus trees are not native to California. The trees were planted, primarily along the southern slope of the lower and upper bench, by the property owners as a wind break. Dr. Dixon notes that historically, the "eucalyptus tree" ESHA associated with the Bolsa Chica mesa has been considered to be the area occupied by the roughly linear grove of trees along the southern bluff of the mesa (Exhibit 20). Most of the trees grow along the base of the bluff in the lowlands. However, some grow on the mesa top near the bluff edge at various locations. Since most of the trees are eucalyptus, the grove is often referred to as the "eucalyptus" grove or "eucalyptus" tree ESHA. However, it is important to note the grove also includes several palm trees and pine trees that are also used by raptors and herons. None of the trees are part of a native plant community. Nevertheless, this grove

of trees has been recognized as an Environmentally Sensitive Habitat Area (ESHA) for over 25 years (USFWS, 1979; CDFG 1982, 1985) because of the important ecosystem functions it provides, including perching, roosting, or nesting, for at least 12 of the 17 species of raptors that are known to occur at Bolsa Chica. Some of the raptors found to be using the grove included the white tailed kite, sharp-shinned hawk, Cooper's hawk, and osprey.

Many of these species are dependent on both the Bolsa Chica wetlands and the upland areas of the Bolsa Chica Mesa for their food. Other raptor biologists who have studied the Bolsa Chica Mesa have also found it to be particularly significant to a large number of birds of prey, including the Northern Harrier, prairie falcon, burrowing owl and the loggerhead shrike. The grove has also been recognized by the Coastal Commission as an "environmentally sensitive area" or environmentally sensitive habitat area (ESHA) as defined by Section 30107.5 of the Coastal Act in previous Commission actions. The Commission first recognized the ESHA status of the grove many years ago, and the California appellate court in 1999 did not question the designation of the Eucalyptus grove as an ESHA protected by the Coastal Act when, in 1995, the County of Orange, on behalf of the predecessor applicant, Kill Real Estate Group, attempted to relocate the Eucalyptus grove, through the LCP process, to the Huntington Mesa, in order to make room for full development of the upper and lower benches of the Bolsa Chica Mesa.

There was little or no discussion in the site-specific definition or delineation of the "eucalyptus" ESHA in the case of this non-native habitat at the Bolsa Chica. Dr. Dixon notes that the map in the 1982 CDFG report truncates the Eucalyptus Grove ESHA in a straight line that corresponds to an extension of Bolsa Chica Street. This arbitrary man-made division does not correspond to anything in nature. The trees continue as a coherent grove along the base of the mesa for several hundred feet beyond the Bolsa Chica Street line, without a gap, and raptors have been observed to use those trees. Therefore, staff has included all those trees in the ESHA maps accompanying staff reports (Exhibit 20, Figure 1). In the 2000 and 2004 recommendations, some of the trees on the mesa top adjacent to Bolsa Chica Street were also included in the ESHA maps (Exhibit 28, Figure 1). Subsequent to the October 2004 hearing, the applicant argued that the latter trees were so far distant from the rest of the grove and so separated vertically that they ought not be considered part of the ESHA. Based on the relative isolation of those trees, Dr. Dixon agreed to recommend that only the trees that were part of the coherent grove (i.e., trees in close proximity to one another) be considered as "eucalyptus" tree ESHA and altered the maps accordingly. This decision was based, in part, on the fact that trees that are part of a grove are thought to be more attractive to raptors for nesting than isolated trees because they provide a greater visual barrier for the nest. However, after agreeing to this, a pair of white-tailed kites (California Fully Protected Species) were seen nesting, this spring, in one of the pine trees at the top of the bluff near Bolsa Chica Street. And according to the applicant's biologists, currently the kites appear to be incubating eggs. Based on this use of the upper area tree by the birds, Dr. Dixon recommend that the cluster of three trees at the top of the bluff adjacent to the terminus of Bolsa Chica Street be considered part of the ESHA. And thus the residential development respect the

Eucalyptus Grove buffer as explained below and as reflected in Figure 1 of Exhibit 20 and in Special Condition 10 of this permit.

As stated above, the “Eucalyptus” Grove ESHA of the Bolsa Chica mesa is unique in that it is the non-native trees that are used by numerous raptor species for nesting, roosting and perching. When the ESHA was designated there was little or no discussion of the site-specific definition or of its delineation. Dr. Dixon opines that perhaps it was because the intuitive and obvious approach was to define and delineate the ESHA by simply drawing a line between the outermost trees of the grove. The 1982 CDFG report defined the ESHA as “the eucalyptus grove adjacent to and on the Bolsa Chica mesa” and included a map with a rough outline of the Eucalyptus grove (which included palm trees) (Exhibit 20). All subsequent maps from a variety of sources have been roughly similar. Commission staff has also created ESHA maps with the same approximate boundaries and has done so by simply connecting the outermost trees. This approach proved adequate for planning purposes until recently, but now appears insufficiently specific due to the issues raised by the applicant’s proposal under the current project to discharge runoff water through buried pipes that traverse the eucalyptus grove.

The current proposal is to discharge runoff from the mesa top through a new 66-inch pipe leading to the lowlands and the construction of rip-rap apron below the discharge to prevent erosion in the lowlands. This would require digging a trench across the eucalyptus grove to the adjacent lowland. The corridor proposed for the pipe contains no trees, is vegetated by non-native grasses and other weedy species, and currently contains an aboveground pipeline that is part of the oil field infrastructure. Dr. Dixon states that the placement of a subterranean pipeline over a period of a few weeks, if it is done in a manner that does not injure nearby trees, and construction takes place at a time when birds are not nesting, and Best Management Practices are employed to prevent erosion or slope instability, a “significant disruption of habitat values” would not occur and would, therefore pass the first test of Section 30240(a) of the Coastal Act. Special Conditions 8, 9, 10, 16 and 17 deal with the construction, water quality and habitat protection issues associated with the new stormdrain.

However, Dr. Dixon points out that the second test of Coastal Act section 30240 is whether the proposed use is dependent on the ESHA resource, and the installation of a pipe to convey runoff from a new residential development is clearly not so dependent (Exhibit 20). Therefore, if the Eucalyptus ESHA is the grove of trees as defined and delineated by a single, two-dimensional polygon that encompasses all the trees, plus all the area above and below the plane created by that polygon, the pipeline installation is not an allowable use. However, if the aboveground portions of the trees themselves constitute the ESHA, then the gaps between the trees are not part of the ESHA and placement of the pipe in the identified corridor would not violate Section 30240(a). Dr Dixon states, “In addition, if appropriate Best Management Practices were employed during installation and if the corridor was subsequently revegetated, it is my opinion that the installation would not create “impacts which would significantly degrade” the ESHA and would be “compatible with the continuance” of the ESHA, and, therefore, would not violate Section 30240(b) of

the Coastal Act either” (Exhibit 20, page 4). Special Conditions 9, Construction Staging Area and Fencing, Special Condition 10, Final Habitat Management Plan, and Special Condition 17, Revised Tentative Tract Map and Plans require the protection of ESHA areas during grading and construction, require the planting of all non-native or denuded areas and require the construction of a rip-rap apron below the stormdrain outlet to prevent erosion in the lowlands.

Dr. Dixon goes on to explain in Exhibit 20 how the above definition of the Eucalyptus ESHA at the Bolsa Chica is reasonable given the site specific circumstances and that this definition should not be extended to a more traditional grove or portion of a forest with native species, if it were a part of a natural vegetation community where the trees would be just one element in the community or ecosystem and the overall system would be defined by and dependent on complex interactions between the trees, the understory plant species, physical soil characteristics, soil microbes and fungi, and the host of invertebrate and vertebrate animal species that act as pollinators, dispersal agents, parasites, herbivores, and predators, among other things. This type of ESHA determination should only be made in substantially similar cases where there are non-native species or horticultural plantings where it is only the trees themselves that provide the important ecosystem functions upon which the site-specific ESHA determination is based. Given the site specific characteristics of the “Eucalyptus” Tree ESHA at the project site the Commission finds the proposed ESHA definition and delineation and stormdrain proposal, as conditioned, consistent with sections 30107.5 and 30240 of the Coastal Act.

The applicant’s biological consultants have pointed out that there is always an arbitrary element in assigning dimensions to protective habitat buffers or development setbacks. Dr. Dixon admits that this is true, at one level. He goes on to say that the biological effects between a 100-foot buffer compared to a 110-foot buffer or those of a 300-foot buffer from a 328 foot (100-meter) buffer are probably indistinguishable. We tend to choose round numbers in whatever units we are using. However, the difference between the 100-foot buffer that the applicant has suggested as being amply protective or the 150-foot minimum buffer in the current proposal and the 100-meter buffer recommended by the wildlife agencies and by staff is not arbitrary. These large differences reflect different opinions concerning the sensitivity of raptor species to disturbance and differences in opinion concerning the acceptable risk of disturbance impacts to raptors, especially raptors that have the potential for nesting at Bolsa Chica (Exhibit 20).

In an urban environment development setbacks often usually inadequate to protect all individuals of wildlife species of concern from significant impacts. In an urban setting a buffer is usually no more than one to several hundred meters and usually less whereas in a natural setting, a buffer of two kilometers has been found to be significantly more protective. Dr. Dixon cites an example of Findlay and Houlihan (1997) where a negative correlation was found between species richness in wetlands and the density of roads on land up to 2000 meters from the wetland and concluded that narrow buffer zones were unlikely to protect biodiversity (Exhibit 20, page 6).

Development must be separated from ESHAs by buffers in order to prevent impacts that would significantly degrade those areas. DFG and the USFWS previously recommended the establishment of a 100-meter buffer on the Bolsa Chica Mesa in the 1980's. Dr. Findlay, of the University of Ottawa, in a letter to the Coastal Commission dated February 9, 2000, recommended a 150-meter buffer for the Eucalyptus grove. The Coastal Commission staff ecologist recommends a minimum 328 ft. (100 meter) buffer around the Eucalyptus trees. In further studying the appropriate buffer for the Eucalyptus tree ESHA, Dr Dixon states:

The buffer around the Eucalyptus tree ESHA is particularly important if those trees are to continue to function as nesting habitat for a variety of raptors. The California Department of Fish and Game and the U.S. Fish and Wildlife Service recommended a 100-m buffer. A literature review found that raptor biologists recommended buffers for various species of nesting raptors from 200 m to 1500 m in width, with the exception of 50-m buffers from visual disturbance for kestrels and prairie falcons. . . .In an independent review concerning a prior development proposal at Bolsa Chica with 100-foot (30-m) buffers, raptor expert Brian Walton opined that developers "...often rely on buffers that I find largely ineffective for reducing raptor fright/flight response." [and] "[t]hey describe unusual tolerance, habituated individuals or exceptions to normal raptor behavior rather than the more common behavior of wild birds."

Dr. Dixon concluded, after evaluating the various case studies and independent reviews specifically of the raptor behavior of the Bolsa Chica Mesa, that a minimum 328 foot (100-meter) buffer is necessary if the Eucalyptus trees are going to function as nesting sites in the future. He further opined that larger buffers are necessary during the extraordinary disturbance that takes place during construction. If raptors are nesting, a 500-ft (152 meter) buffer should be established around the nest during construction activities. As discussed above, the Brightwater development project proposal of a varied width buffer, including a minimum of only 150 feet around the Eucalyptus grove is inadequate to protect the ESHA from myriad human and domestic pet activities that occur when residential development is adjacent to a sensitive area.

Buffers should not be used for activities that have negative effects on the resources that are being protected. The "eucalyptus" tree ESHA is being fairly heavily used by hikers, runners, dogs, bikers, and four-wheel drive enthusiasts who use the steep slopes on the upper mesa as a test track, and more recently by youthful paintball warriors who conduct their battles within the eucalyptus grove (and occasionally cut down small trees). In fact, Dr. Dixon states, the current types and intensities of use within and adjacent to the ESHA violate the provisions of Section 30240 of the Coastal Act. Therefore, most of the raptors that currently use the trees for perching or nesting are probably from the subset of the regional population that is relatively tolerant of such human disturbance due to some combination of genetical makeup and individual history.

Dr. Dixon suggests that this be kept in mind when assessing the results of a flushing study done by the applicant's biological consultants (LSA, 2000). They found that, when their perches were approached by a pedestrian, raptors flushed at distances that varied among species, individuals, and height of the perch. The lower the perch the sooner the birds flushed. Kestrels were most tolerant of human presence, often not flushing at all (flushing range 0 – 13 m). At the other extreme the single turkey vulture approached flushed at a distance of 70 m. White-tailed kites, which are a good model for setting buffer widths because they are sensitive to human intrusion in natural settings, generally flushed when approached to 30 m. Dr. Dixon asserts that, given the current level of disturbance within the ESHA, it is reasonable to assume that these birds are relatively tolerant of human presence and these flushing distances should be considered minimums. Less tolerant birds would flush much sooner and may currently avoid many areas in the ESHA. Jurek (2000) pointed out that, "Individuals within a species may have differing levels of response to human activities, owing to variation in the population for tolerating unusual situations, or to differences in habituating to human activities out of past experience or upbringing. The same level of activity that would not adversely affect one of the habituated raptors might be perceived by a newly arrived individual of the same species in the ESHA to be threatening, causing the bird to not return there." (Exhibit 20, page 6-7).

These data indicate that the 328 foot (100 meter) buffer recommended by USFWS (1979) CDFG (1982), and by staff is not only necessary to prevent disturbance to raptors that utilize the "eucalyptus" ESHA, but is also large enough to provide significant foraging opportunities close to the nest. This is particularly important because distant foraging increases the risk of nest predation. White-tailed kites are a fully protected species in California, have frequently nested at Bolsa Chica, and are generally considered relatively sensitive to human disturbance. Therefore, Dr. Dixon recommends that buffers that are adequate to protect nesting white-tailed kites should be adequate for most of the other species that are likely to nest in the Bolsa Chica ESHA and notes that the following minimum spatial buffers have been recently recommended for nesting white-tailed kites: 100m (Bloom, 2002); 100m (Holmgren, 6/7/2002); 50m (J. Dunk (raptor researcher) in personal communication to M. Holmgren, 2002); 46-61m (with "low-frequency and non-disruptive activities"; Froke, 2002). These estimates suggest that a 100-m buffer is probably adequate, but not overly conservative.

The applicant's biological consultants (LSA, 1999) have concluded that a "100 foot buffer will provide adequate distance to permit nesting by the most common and least sensitive raptor species in all suitable portions of the ESHA." Even if true, this is a low standard of protection and the current proposal for a minimum of 150 feet is only marginally better in the affected areas. In the same report, LSA states that, "The southern side of the ESHA will have a great deal of utility for virtually all the nesting birds, because it is bordered by hundreds of acres of open space, it will be screened from the development area by the northern edge of the ESHA, and a substantial portion of the grove is a least 100 meters from future development." Dr. Dixon's opinion of the statement by the applicant's consultant is that taken together, these statements indicate that development closer than 100 meters will reduce the utility for nesting raptors of those portions of the ESHA that are

closest to the development footprint and therefore a reduced buffer would violate Section 30240(b) of the Coastal Act because the portions of the ESHA nearest the development would be significantly degraded and no longer suitable for nesting by some of the raptor species at Bolsa Chica. He recommends that the northern side of the ESHA be provided with a level of protection that is fundamentally the same as that described by LSA for the southern side and a 100-m buffer will accomplish this goal (Exhibit 20, page 8).

For the reasons cited above the proposed project can only be approved if final Habitat Management Plans are submitted showing a Eucalyptus Tree ESHA buffer of 328 ft in width as measured from the western and northern boundary of the Eucalyptus ESHA as required in Special Condition 10. The Eucalyptus Tree ESHA boundary is generally depicted in Figure 1 of Exhibit 20. Only as conditioned is the proposed project consistent with Section 30240 of the Coastal Act.

2. Southern Tarplant ESHA

The Southern Tarplant is a Federal "Species of Concern" and listed as a 1B (Rare, Threatened, or Endangered in California and Elsewhere) plant by the California Native Plant Society (CNPS), and it also meets the CEQA Guidelines' definition of rare, threatened, or endangered species. Southern Tarplant is an annual plant that favors damp, disturbed areas and is generally restricted to grasslands, wetland edges, vernal pools, and alkaline flats in the coastal counties of southern California and has been greatly reduced and populations have been fragmented by development. According to Dr. Dixon, Southern Tarplant has become rare in California and its remaining habitat is particularly valuable due to the loss of its natural habitat. The Department of Fish and Game further noted in their January 16, 2002 EIR comments on the proposed project, that one of the characteristics of the Southern Tarplant is that, as an annual (life cycle is completed within one year), the number of detectable (above-ground flowering) plants visible in any one year vary sharply depending on factors such as soil moisture. Because of this characteristic of the plant, quantifying populations and determining the impacts of a development project on existing tarplant communities can be problematic. Therefore, the long-term health of the tarplant population depends on an extensive seed bank.

The applicant's consultant conducted tarplant surveys of both the upper and lower benches in 1999, 2000, 2001 and 2002. The largest concentration of tarplant by far is on the lower bench; however, the upper bench also contains several sizeable patches of the sensitive plant (Exhibit 16). Dr. Dixon notes that based on the applicant's surveys, the tarplant tends to be much more widely distributed among the habitats on the lower bench than on the upper bench where it is almost entirely confined to the area surrounding the seasonal pond adjacent to the Los Patos wetland. There may be habitat differences between the upper and lower benches that account for this phenomenon. Southern Tarplant is most abundant near trails and other open disturbed areas. Scattered individual plants on the upper bench do not constitute ESHA because over the four-year survey period these plant populations have remained only a few scattered individuals. However, the Tarplant populations around the Los Patos wetland on the upper bench should be

considered ESHA because these more dense populations have persisted during the survey period and Southern Tarplant has become rare in California due to the loss of its native habitat and therefore its remaining habitat is particularly valuable. As stated above, Southern Tarplant is a Federal "Species of Concern" as well as a California Native Plant Society "1B species" (rare, threatened, or endangered in California and elsewhere). Similarly, the patches of tarplant near the western edge of the development area are part of the extensive population on the lower bench and are part of the ESHA. The southern tarplant at Bolsa Chica is one of the more significant populations in terms of numbers in southern California, according to Dr. Dixon. As environmentally sensitive habitat areas, the tarplant populations must be preserved in place and cannot be eliminated or translocated in order to use their existing locations for residential use.

The October 2004 Brightwater development proposal would have eliminated two of the existing ESHA populations of Tarplant within the then proposed 28-acre Upland Habitat Park, and a third tarplant population located in the area of the then proposed 2.5-acre private recreation center surrounding the existing Los Patos seasonal wetland would also have been eliminated. The applicant later proposed to translocate the Tarplant that was within the footprint of the private recreation center and the park elsewhere on the upper bench instead of onto the lower bench as with the original proposal. The proposed On-Site Preservation/Translocation Plan was also inconsistent with section 30240(a) of the Coastal Act. Section 30240(a) of the Coastal Act does not allow impacts to existing ESHA, even to move or translocate it adjacent to its current location. Further, as explained above, the Tarplant exists where it is currently located because the soil conditions and other factors and there is no guarantee that the plants will survive in a new location. Habitat that qualifies as ESHA under the Coastal Act must be protected in place, except under limited situations not applicable here, pursuant to Section 30240 of the Coastal Act. Only resource dependent uses are allowed within areas designated as ESHA.

The Southern Tarplant populations that constitute ESHA must also be protected from adjacent development with an adequately sized buffer. The Commission's staff ecologist recommends that a 50-foot buffer be established adjacent to the ESHA boundaries defined by the presence of tarplant. The Commission has used such a buffer to protect sensitive vegetation in past actions, consistent with Section 30240(b) of the Coastal Act. The current Brightwater development project now proposes to retain in place the Southern Tarplant adjacent to the Los Patos Wetlands, which has been determined by the Commission's staff ecologist to be ESHA under Section 30107.5 of the Coastal Act. Subsequent to the October 2004 Commission hearing the applicant's consultant went back to the project site to verify and refine the Tarplant mapping using GPS and aerial photos and original field notes and Los Patos seasonal pond or wetland and submitted that information to staff (Exhibit 16a). The Commission staff biologist now agrees with the delineations of the Southern Tarplant ESHA and the Los Patos Wetland. The applicant is also proposing a 100-foot wetland buffer and a 50-foot Tarplant buffer and the preservation of the area through the proposed 3.2-acre Southern Tarplant and Seasonal Pond Environmental Protection Area. However, there will be unavoidable, onetime impacts to the Southern Tarplant and wetland buffers for the construction of the 1.2 million

underground water reservoir. The underground facility has been reduced from its previous size of 2.1 million gallons and has been redesigned such that future access to the facility will be from outside of the buffer area. Once construction is complete the area will be revegetated.

Although the applicant is proposing to preserve all Southern Tarplant and the wetlands and provide appropriate buffers, no revegetation, monitoring or maintenance plan for the 3.2-acre Southern Tarplant and Seasonal Pond Environmental Protection Area was submitted. Therefore, the Commission imposes Special Conditions 10 and 17 require that a habitat management plan and revised plans be provided for the Southern Tarplant/Seasonal Pond area that includes the plant palette and maintenance and monitoring, similar to the other onsite habitat areas. The habitat preservation area will also need to be managed and maintained in perpetuity. Special Conditions 2 and 4 require that this be carried out. Only as conditioned is the proposed project consistent with Sections 30233 and 30240 of the Coastal Act.

3. Burrowing Owl ESHA

One of the sensitive raptor species that uses the Bolsa Chica mesa is the burrowing owl. The Department of Fish and Game (DFG) considers the burrowing owl (*Athene cunicularia*) a California Species of Special Concern. It hunts for prey in open grasslands and areas of ruderal vegetation. The current proposed Brightwater project will impact 68 acres of such habitat. In addition to foraging over the grasslands, the burrowing owl uses the abandoned burrows of the California ground squirrel and other small rodents as shelter during the nesting and wintering seasons. The burrowing owl is in decline in most areas of California, especially in the coastal zone due to the loss of habitat as a result of development and rodent control activities. The rapid decline of this species in Orange County has been chronicled in the latter half of the 20th century.⁷

The Brightwater development site contains many burrows that have probably been used by the burrowing owl. One or two wintering birds are thought to use the Bolsa Chica Mesa, as evidenced by repeated observations of one owl or two owls in the winters of 2001-2002 and 2002-2003 by the applicant's biologists (Exhibit 17a). However, it is believed that the Bolsa Chica Mesa is used by an unknown number of migrant burrowing owls as a stop-over foraging area, according to Dr. Dixon's communications with other raptor biologists. It is raptor biologist Peter Bloom's professional opinion that migrant and wintering burrowing owls use the Bolsa Chica Mesa during most years. The Bolsa Chica Mesa is one of the few areas in the region that still has the potential for nesting by this species in the future. Additionally, the burrowing owl is one of three species of raptors at Bolsa Chica that DFG biologist Ron Jurek thinks is most in need of habitat protection. Based on this information, Dr. Dixon has determined that the area on the Bolsa Chica

⁷ Hamilton and Willick (1996) and Gallagher and Bloom (1997), according to Draft Subsequent Environmental Impact Report, Volume I, Brightwater Development Project, Orange County, California, SCH #1993071064, LSA, November 17, 2001, page 4.9-21.

Mesa as mapped by the applicant's biologist as burrowing owl habitat constitute an ESHA as defined by the Coastal Act, and therefore also should be protected as required by the Coastal Act. The Commission agrees. Additionally, the DFG, in its January 16, 2002 comments on the project EIR, recommended that the burrowing owl habitat on the upper bench be retained, if feasible.

Upon receipt of the applicant's mapping showing the burrowing owl habitat location, at the request of Commission technical staff, planning staff suggested that the applicant again review the submittal of the mapped burrowing owl use area. It appeared to staff that the area might have been drawn overly broad. The applicant however did not alter the map of burrowing owl primary roosting areas. However, several months later, the applicant did survey the project area for potential burrow habitat. On June 15, 2004, the applicant's consultant, LSA, submitted the results of a survey taken on June 2, 2004 (Exhibit 17). The applicant's June 2004 survey of ground squirrel activity found approximately 130 ground squirrel burrow locations, providing a rough approximation of how squirrels and their burrows are distributed on the site, as explained by the consultant. The highest use areas were areas where there is a break in topography; at the edge of the slope of the upper mesa on the west and at the bluff edge on the south and on the bluff edge of the lower bench overlooking Outer Bolsa Bay and the lowlands on the southeastern bluff edge of the lower bench. LSA concluded that, "the best way to offset potential impacts to burrowing owl habitat would be to enhance owl habitat suitability somewhere on the lower mesa where human disturbance could be managed".

In reviewing the October 2004 Brightwater development proposal Dr. Dixon however recommended that the Commission use a similar approach in identifying the Burrowing Owl ESHA on the Bolsa Chica as it did in a recent project in the South Central Coast District, the Arco Dos Pueblos Golf Links (December 11, 2002 Commission Hearing). In that case, the Commission designated only trees known to have been used by white-tailed kites for nesting or perching and adjacent trees as ESHA. In the case of Brightwater, LSA Associates has identified the area containing burrows known to be used by wintering burrowing owls. Burrowing owls tend to reuse burrows year after year and an area should be considered occupied if at least one burrowing owl has been observed occupying a burrow there within the last three years, according to the California Burrowing Owl Consortium and the Department of Fish and Game. Therefore, the LSA field observations were good evidence of occupied habitat, and Dr. Dixon recommended that the Commission designate as ESHA the area mapped by LSA as the "Primary roosting areas used by wintering burrowing owls". This LSA mapping is shown in Exhibit 17a and is reflected in Figure 1 of Dr. Dixon's March 28, 2005 memo (Exhibit 20).

Following the October 2004 Commission meeting the applicant's biological consulting team presented staff with alternative mapping of the owl use area based on the observations of the original surveyors (Exhibit 17b). They suggested a revised burrowing owl use area by compiling their observations of the bird from October 17, 2001 through April 21, 2003. The "burrowing owl use area" was revised to be a smaller area by eliminating one burrow where one bird had been seen once, but abandoned the burrow in

favor of another one. Evidence of abandonment was spider webs and debris at the burrow entrance. The Finally, the date of the observation of November 2001 just exceeds the Consortium's three year criteria for considering a burrow to be occupied. For these reasons the Commission's staff ecologist recommends that the Burrowing Owl ESHA be delineated as shown on the applicant's November 17, 2004 submittal. Although there is merit in accepting the applicant's a reduced Burrowing Owl ESHA delineation as proposed by the applicant, there is no justification for the proposed reduction in the Burrowing Owl ESHA buffer.

As discussed in Section D.1 of this report, buffers serve several important functions. Section 30240(b) of the Coastal Act requires that ESHA be protected from adjacent development. In order to avoid disturbing burrowing owl habitat, the California Burrowing Owl Consortium and the California Department of Fish and Game recommend 164 foot (50 meter) buffers during the non-breeding season, 264 foot (75 meter) buffers during the breeding season, and a minimum 6.5 acres of foraging habitat maintained adjacent to the burrows. However, given that the existing use of the Bolsa Chica mesa is by wintering and migrant birds, the Commission finds that a 164 foot (50 meter) buffer is adequate to protect the Burrowing Owl ESHA. However, as conditioned in Special Condition 5, the applicant must abide by the "Burrowing Owl Survey Protocol and Mitigation Guidelines" by California Burrowing Owl Consortium to determine if there is any occupation of the burrows of the Burrowing Owl ESHA. Further, the proposed project also includes grading in the Burrowing Owl ESHA buffer for the construction of the residential lots and permanent irrigation within the first 50 feet of the 164 ft. buffer. Grading to support residential development and the extension of residential land use are not allowed in habitat buffers. As conditioned herein, residential grading is not allowed within the 164 foot buffer. Only as conditioned in Special Condition 10 to submit revised habitat management plans for a 164 ft. wide Burrowing Owl buffer to allow only that grading in the Burrowing Owl buffer for the removal of existing roads so that the area can be restored with native vegetation, for the public trail in the upper 25 ft of the buffer and any necessary water quality treatment facilities, and planting and maintaining of the buffer for habitat purposes consistent with the approved fuel modification and habitat management plans can the project be found consistent with Section 30240(b) of the Coastal Act with regards to the provision of an adequate buffer to protect the Burrowing Owl ESHA.

4. Annual Grassland and Ruderal Foraging Habitat

The vegetation type on the project site is predominantly non-native annual grasslands and ruderal vegetation. Of the 105.3-acre development area, 82.6 acres of open vegetated areas are dominated by annual grasslands (55.9 acres) and ruderal grassland/forb (26.7 acres), according to the project EIR. Although annual grasslands and ruderal vegetation are generally not considered to be sensitive resources because of the exotic character of the dominant species, these habitats nevertheless provide important support for many native species of plants and animals. This habitat type is particularly important as foraging habit for many species of birds of prey and it is being rapidly replaced by development in

much of coastal southern California. At the Bolsa Chica mesa, the annual grassland and ruderal vegetation provides critical support for the many species of birds that use the Eucalyptus and palms trees along the bluff edge for perching, roosting and nesting. Without adequate foraging habitat nearby, the existing Eucalyptus grove of the Bolsa Chica Mesa would not continue to function as ESHA.

In the past, little concern has been expressed nor any actions taken about the loss of annual grasslands and ruderal vegetation given their status as non-native habitat. However, in recent years, with the increasing loss of native prairies, it has come to the attention of the Department of Fish and Game and other raptor biologists that the remaining non-native annual grassland and ruderal vegetation are becoming a critical food source which is essential to the health of populations of many birds of prey and other native species. For this reason, DFG has recommended mitigation under the California Environmental Quality Act for the loss of such non-native habitat. In over 60 recent actions, DFG has required preservation of foraging habitat at a ratio of 0.5 acres preserved to each acre lost to development. At Bolsa Chica, the foraging habitat on the mesa is absolutely necessary for the continued presence of many of the raptors that utilize the Eucalyptus ESHA. Furthermore, concerning the interconnectedness of the foraging habitat and the Eucalyptus ESHA, DFG biologist Ron Jurek wrote, in an October 2000 independent review of the potential effects of development on raptors of the Bolsa Chica Mesa, that the Eucalyptus ESHA "...is a zone of trees with good perching and nesting conditions within raptor habitat. It is not the raptor habitat itself. In my professional opinion, for most of the raptor species known to use the ESHA, raptor use depends primarily on the availability of the food resources of the surrounding lands....".⁸

As proposed, the Brightwater development project would eliminate 68 acres of annual grassland and ruderal habitat, combined. In approving the development, the County of Orange also adopted the project's subsequent EIR. The EIR states that the proposed loss of foraging habitat will not be significant considering the existence of the remaining habitat on the mesa and in the region. The Commission notes that of the existing grassland and ruderal habitat on the upper bench of the Bolsa Chica Mesa, the Brightwater development project eliminates all but 1.5 acres of grassland and all but 6 acres of ruderal vegetation. Therefore the EIR statement must be referring to the grassland and ruderal habitats remaining on the lower bench of Bolsa Chica Mesa. However, the Commission notes that the lower bench is not before the Commission given that the applicant has refused to include it in this coastal development permit application. There is no guarantee that the lower bench will be sold for conservation purposes.

Moreover, even if the lower bench were to be preserved, the Commission believes that the loss of nearly 70 acres of annual grassland and ruderal habitat directly adjacent to the Eucalyptus Tree ESHA would still be a significant loss. For the reasons stated in the extended quotation listed below, the impacts on the raptors is likely to be directly related

⁸ Jurek, R. (CDFG; Member, Independent Review Committee appointed by CCC, CDFG & Hearthside Homes). October 16, 2000. Letter to S. Hansch (CCC) concerning probable effects of development on raptors at Bolsa Chica Mesa.

and proportional to the size of the vegetation removed, regardless of the presence of similar vegetative communities nearby. In fact, if anything, the ratio should be higher here, due to the particular significance of the Bolsa Chica Mesa to a great variety of raptors. The special importance of the Eucalyptus trees and adjacent foraging habitats to many species of nesting and wintering raptor species has been recognized by the wildlife agencies for over 20 years.

The project EIR also suggested that the loss of foraging habitat would not be significant based on a statement of another October 2000 independent reviewer of the Bolsa Chica Mesa, Brian Walton, that concluded that the overall population status would not be changed for any species of raptor at Bolsa Chica. Although this statement is true, Dr. Dixon points out that this standard is not adequate in the context of resource conservation and states, "it would be a very low standard that ignores the local or regional significance of a species' presence. It simply means that the viability of the species in California is unlikely to be measurably decreased by local losses. Similar claims can be made of impacts even to many endangered species where the loss of a few individuals is unlikely to push the species to extinction. That fact is, however, not a compelling argument for additional impacts". In fact, Mr. Walton did not intend to suggest that the raptor habitat at Bolsa Chica was unimportant. This is obvious in the following excerpts from Mr. Walton's letters to the Department of Fish and Game and to the Coastal Commission:

Pete [Bloom] and I have studied raptors in coastal California for the last 25+ years. No one else can say that. We still feel that the raptors and the Bolsa Chica habitat are important. That has been a consistent opinion for nearly 20 years from the only two people who have been continuously focused on these species in these locations.

During that period ... the rest of Orange County has largely been paved over and upland grasslands near coastal wetlands are almost non-existent. Hence, it would be likely that the opinions we had in 1982 on the importance of this habitat are even more relevant in 2000. I have difficulty in understanding why any development is allowed to occur in this area.

and:

The clearest case where development is impacting raptors and their prey species but where the Commission still is uncertain of the real impact on raptor populations, is in Orange County. There, most raptor species have been completely eliminated from the coastal zone as breeders and most of the region has vastly reduced wintering population range. Even still, the last bit of available open space (Bolsa Chica) is being considered for some development, with the idea that the remaining raptors will move elsewhere or not be impacted, or live in remnant open space within the developed area.

It is not accurate, in fact, that individual raptors when impacted by development simply move elsewhere and everyone survives. If that were true, there would be areas of incredible density in non-developed areas, where the impacted raptors have moved and are now living with pre-existing birds. This philosophy would be analogous to thinking that if you tore down one of two adjacent apartment buildings, that all the

residents would simply move into the remaining building and live two families to an apartment. The density of raptors is dependent on a variety of things, so birds cannot actually just get denser in adjacent areas by moving off development sites.

Given the above facts concerning the importance of grasslands and ruderal habitats for the proper functioning of the adjacent Eucalyptus ESHA for the many raptors that use the Bolsa Chica Mesa, a decision has to be made as to whether these vegetative communities themselves constitutes ESHA as defined by the Coastal Act. Dr. Dixon outlines the issues that have to be factored when making such a determination. Although the raptor foraging habitat at Bolsa Chica is clearly of high ecological value because of its context in maintaining the raptors, including the burrowing owl, the non-native habitat alone does not constitute ESHA. However, its loss as contemplated in the proposed Brightwater development project would clearly be inconsistent with Section 30240(b) of the Coastal Act, which prohibits development adjacent to ESHA that would significantly degrade the ESHA. As discussed herein, the importance of foraging habitat is clearly such that the loss of a large amount at Bolsa Chica would result in "impacts which would significantly degrade" the adjacent Eucalyptus Tree ESHA such that it would no longer be especially valuable to birds of prey. Therefore, to be in compliance with Section 30240(b) of the Coastal Act, development must be sited such that this does not occur.

Because of the significant adverse effects of development on raptor foraging habitat, Dr. Dixon suggests that the Commission follow the recommendation of the Department of Fish and Game and seek mitigation for annual grassland and ruderal foraging habitat on the Bolsa Chica Mesa by preserving 0.5 acres of such habitat for each acre lost to development. Preservation preferably should be on the project site adjacent to the Eucalyptus Tree ESHA and could reasonably include the recommended buffer areas for the Eucalyptus trees and for the burrowing owl habitat described above.

To mitigate the loss of 68 acres of annual grassland and ruderal vegetation the applicant would need to provide 34 acres of habitat, preferably on-site by widening the Eucalyptus and Burrowing Owl ESHA buffers and planting them with native grassland species. As conditioned to widened these buffers and remove the restriction on the plant palette from all but the first 50 feet of the buffer closest to the homes, to plant the majority of the remainder of the buffer in native grassland species and to provide the remainder off-site of the 34 acres in native or non-native grassland that cannot be provided on-site, consistent with the final approved final habitat management plan, the proposed project is consistent with the Coastal Act concerning the protection of raptor foraging habitat.

5. Biological Impacts of Fuel Modification on the Eucalyptus Grove ESHA

Although the proposed project is not located within a high fire danger area, the proposed homes are of concern to the Orange County Fire Authority (OCFA) due to the presence of the existing Eucalyptus trees located primarily on the southern bluff face of the upper bench of the Bolsa Chica Mesa. Eucalyptus trees are highly flammable and are not

normally allowed to be planted or retained within 170 feet of habitable or combustible structures. OCFA has prepared Fuel Modification Guidelines for development in areas where there is the potential for damage to life or property due to fire. The Guidelines do however allow special consideration for rare and endangered species, geologic hazards, tree ordinances, or other conflicting restrictions as identified in the environmental documents. OCFA Fuel Modification Guidelines are as follows:

Zone A – provide a minimum 20 feet wide level graded area at the top or base of slope and immediately adjacent to the protected development, no combustible structures, fully irrigated with automatic irrigation system, all vegetation shall be highly fire resistant and shall not include undesirable combustible vegetation.

Zone B – provide a minimum 50 feet wide irrigated area and must be planted with plants from the approved OCFA Plant List. No combustible construction is allowed.

Zone C and D – are considered the non-irrigated, thinning zones. Zone C is 50 feet in width and requires 50% thinning with removal of all dead and dying undesirable species. Zone D is 50 feet in width and requires 30% thinning with removal of all dead and dying growth and undesirable species. Specific requirements for these zones include: all fuels be reduced to a maximum of 8-12 inches in height and native grasses, when used, shall be cut after annual seeding and shall not exceed 8 inches in height. All plants within these zones must be chosen from the approved OCFA plant list. Trees which are being retained with the approval of the agency having jurisdiction shall be pruned to provide clearance of three times the height of the under story plant material or 10 feet, whichever is higher. Dead and twiggy growth shall also be removed. All existing plants or plant grouping except cacti, succulents, trees and tree-form shrubs shall be separated by a distance of three times the height of the plant material or 20 feet, whichever is the greater.

The applicant has designed the proposed subdivision such that the residential lots are as close to the bluff edge as possible in order to maximize the use the upper bench for residential development and to maximize ocean and wetland views of the future homes owners. The existing Eucalyptus grove is located primarily along the bluff face with very few trees on the bluff top. The residential lots are set back 150 to 382 feet away from the Eucalyptus trees. Because no combustible structures can be located within 170 feet of the Eucalyptus trees the 20 foot wide Fuel Modification Zone A is on the rear yards of the residential lots. Because the Eucalyptus trees are on the bluff face, the set back distance between the trees and the homes represent both vertical and horizontal distance and appears to be based on what is allowable under OCFA Guidelines as opposed to what is necessary to protect the viability of the Eucalyptus grove for continued raptor nesting, roosting and perching habitat, as is required by Section 30240 of the Coastal Act. Where the bluff is steepest and the trees are furthest away from the residential lots the setback from the bluff edge is no more than 100 ft (Exhibit 12).

Initially the entire area was proposed as Eucalyptus Tree ESHA buffer and the applicant assured staff that OCFA would approve the habitat restoration and preservation plan because the native plants that were chosen were all low growing, low fuel load and could be sustained on their own after establishment with temporary irrigation (2-5 years). Staff was later told by the applicant that OCFA is requiring that the first 50 feet closest to the homes be permanently irrigated in order to avoid drought conditions. On March 11, 2005 staff received from the applicant a revision to the project description concerning the width of the Eucalyptus Tree ESHA buffer and a 4 page Conceptual Plan OCFA Protection Zones and Program Description (Exhibit 4). Based upon OCFA requirements, the applicant has further reduced the ESHA buffer by 50 ft. and this 50 foot area will now become Zone B Ecotone Management area, to be permanently irrigated for interim establishment and drought conditions. The March 11th letter states that although the applicant wishes to remove this area from the habitat buffer that it will function no differently. The applicant argues that although the area will be managed to protect future homes from fire damage, that it will function almost identical to the adjacent "pure" habitat buffer. The applicant notes that both the ecotone management area and the habitat buffer will be planted with a controlled palette that allows only low-growing, low-fuel natives. If any other native plants colonize the area they will have to be removed. Although staff has yet to receive written confirmation of approval from OCFA of the latest conceptual fuel modification plan received on March 11, 2005 or the original habitat creation and monitoring plan received on January 21, 2005, the applicant contends that neither area will have to be managed in the traditional manner of mowing, thinning or pruning or other mechanical maintenance activities.

Clearly the ecotone management area is being designed and maintained as support for the adjacent residential development. Native plants do not need to be permanently irrigated to buffer native habitat from other development. Indeed, the adjacent "pure" buffer is not being permanently irrigated. The Department of Fish and Game (DFG) in their review of the previously proposed October 2004 fuel modification program expressed concerns over the non-compatible goals of habitat protection and fire protection for adjacent habitable structures. DFG noted in its April 24, 2003 review of several documents associate with the proposal that, a modified plant palette had been prepared to avoid native coastal sage or coastal bluff scrub species prohibited by the County's list of undesirable species including California sagebrush (*Artemisia californica*) and other common coastal sage scrub species. Also cited by DFG was the irrigation of coastal sage scrub (css) that was being protected in place and the normal requirement that css vegetation be thinned and removed as stated above in the Zones C and D requirements. Concern was also expressed over the limited list of species proposed for the then proposed coastal prairie plant community, especially given the abundance of non-native grasses and forbs that would have competed with this new habitat. DFG suggested that additional local native species be added to the coastal prairie palette in order to increase native diversity and include native coastal grassland species that are more disturbance adapted. Finally, DFG commented on the likely results of the introduction of irrigation, mowing, thinning and other habitat disturbance that would have been created by using the upland habitat park, including the Eucalyptus ESHA buffer, for fuel modification purposes.

Specifically cited examples are the negative alterations of native arthropod communities and vegetation thinning requirements requiring the removal of species such as California sagebrush. In the previous application DFG ultimately concluded, after an exchange of several rounds of clarifications between the applicant's biological consultants, that the Eucalyptus ESHA would not be adversely affected if all of the specific construction and management activities of the conceptually approved fuel modification plan were followed. Nonetheless, DFG also stated that they "do not consider fuel modification zones, regardless of their native species content, to be considered acceptable as mitigation for biological impacts. "While the applicant has yet to receive DFG approval of the current habitat creation and monitoring plan, many of the same concerns are present in the instant application.

Section 32040(b) requires that development adjacent to ESHA be sited and designed such that significant impacts to the ESAH are prevented and that the adjacent use be compatible with the continuation of the habitat area. Based on this Coastal Act provision, Commission staff ecologist is prepared to recommend that the Commission approve limited fuel modification development in the habitat buffer. First the Eucalyptus Tree and Burrowing Owl buffers would have to be widened as recommended above, for the reasons set forth above before development to support an adjacent use could occur within the habitat buffers. Secondly, the plant palette should only be restricted within the first 50 feet closest to the residential lots where permanent irrigation is also proposed by the applicant. Periodic mowing (every 3-5 years) within that 50 foot area could also occur as well as within the next 50 ft area closest to the homes. However, the plant palette must not be restricted beyond the 50 foot area closest to the homes nor should permanent irrigation occur beyond this point. The plant palette must contain species appropriate to a native California grassland community in coastal Southern California on the relatively flat mesa top area. Pruning and thinning and all other fuel modification activities are prohibited in the habitat buffers except for temporary (3 to 5 years), above ground irrigation if needed for establishment of the native plants. Only as conditioned to prepare a revised fuel modification plan that is consistent with these terms and the requirements of the final habitat management plan is the proposed project consistent with Section 30240(b) of the Coastal Act.

E. PUBLIC ACCESS AND RECREATION

The provision of public access in new development proposals is one of the main tenants of the Coastal Act, especially in conjunction with new development located between the sea and the first public road, such as the subject project. The 225-acre Bolsa Chica Mesa is located between the first public road and the mean high tide of the sea. At roughly 50 ft. above mean sea level, spectacular views of the wetlands and the associated wildlife and uninterrupted views of the Bolsa Chica State Beach and Pacific Ocean are available from the upper bench of the Bolsa Chica Mesa. Santa Catalina Island is also often visible from the project site. The Bolsa Chica Wetlands at approximately 1,000 acres is the largest

remaining wetland in Southern California. Following the 1997 State acquisition of most of the remaining wetlands that were under private ownership, a comprehensive Bolsa Chica wetlands restoration effort is now underway. Given the prominence of the adjacent Bolsa Chica wetlands, appropriate public access and passive recreational opportunities must be provided and conspicuously posted. Further, the Coastal Act gives priority to land uses that provide opportunities for enhanced public access, public recreation and lower cost visitor recreational uses.

Section 30210 Access; recreational opportunities; posting

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

(Amended by Ch. 1075, Stats. 1978.)

Section 30211 Development not to interfere with access

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 New development projects

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) Adequate access exists nearby, or, (3) Agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

(b) For purposes of this section, "new development" does not include:

(1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.

(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.

(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.

(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.

(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.

As used in this subdivision "bulk" means total interior cubic volume as measured from the exterior surface of the structure.

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

(Amended by: Ch. 1075, Stats. 1978; Ch. 919, Stats. 1979; Ch. 744, Stats. 1983.)

Section 30212.5 Public facilities; distribution

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30213 Lower cost visitor and recreational facilities; encouragement and provision; overnight room rentals

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.

(Amended by: Ch. 1191, Stats. 1979; Ch. 1087, Stats. 1980; Ch. 1007, Stats. 1981; Ch. 285, Stats. 1991.)

The previously proposed Brightwater development project did not provide for maximum public access to and along the bluff where views of the coast are available, as required by the Coastal Act. The project included a 28-acre upland habitat park and a 0.6-mile long paved pedestrian/bicycle trail, bicycle racks, benches, a kiosk and interpretive information along the slope and bluff face. The park was to be dedicated to the County Department of Harbors Beaches and Parks. However, despite the provision of these recreational amenities, general public access to the amenities was limited. The subdivision was designed with guard-gated entries and general public vehicular access was not allowed within the residential community. The extension of a separate public road on the eastern project boundary (Bolsa Chica Street) was the only public entry into the entire 105-acre site where 30 public parking spaces were proposed. Further, notice to the public of the availability of the recreational amenities was inadequate. Public access provisions to the recreational amenities were inconsistent with the Coastal Act mandate of maximizing public access opportunities. As proposed, several aspects of the recreational amenities and public parking lot also significantly adversely impacted environmentally sensitive resources of the site.

The currently proposed project has vastly improved public access provisions. The residential subdivision is no longer proposed as a gated private community. The guard houses and gated entryways have been eliminated and public vehicular access is no longer prohibited. The public will now be able to drive, bicycle or walk into and throughout the community, park along any subdivision road, and use all three of the proposed paseos or vertical walkways leading to the passive habitat park and trail. The public parking lot within the habitat park has been eliminated. The project frontage road, Los Patos Avenue, will also be widened, paved and landscaped and provides the opportunity for 114 additional on-street parking spaces. The trail has also been reduced from a 12-foot wide paved pedestrian/bicycle facility to a more environmentally friendly, 6-foot wide decomposed granite pedestrian only trail. Although these changes have been significant and have brought the proposed project more in line with the Coastal Act public access and recreation mandates, additional changes are necessary.

The off-site signage informing the public of the availability of the proposed park is located at Warner Avenue and Bolsa Chica Street. No signage of informing the public of the habitat park and trail is provided at the community entrance at the intersection of Warner Avenue and Los Patos Avenue. The existing publicly owned Bolsa Chica Ecological Reserve parking lot is located at Warner Avenue and Pacific Coast Highway. Many visitors from outside of the local area use this parking lot to enjoy the wetlands. This would be a good location for informing the public of the proposed upper bench trail and passive habitat park. The applicant should work with the Department of Fish and Game, managers of the Ecological Reserve, to include public signage and printed information concerning the upland habitat park, at the Ecological Reserve parking lot and in Ecological Reserve literature. To further appropriately maximize public access and enjoyment of this significant coastal resource, the applicant shall also install benches, interpretive signage and trash receptacles along the trail.

Public access and opportunities for public recreation are given priority in the Coastal Act over private residential development. Therefore, the public access and passive public recreation amenities must be constructed and open for public use prior to or concurrent with private residential use of the site. According to the applicant, the plan is to have the State Lands Commission take over ownership of the habitat park and trail. However, the trail and the portion of the habitat park closest to the residential development would be managed and maintained by the homeowners association for public access, passive recreation, habitat protection and approved fuel modification purposes through a management and maintenance easement. Only as conditioned for the additional public access signage, the provision of benches, interpretive signage and trash receptacles, dedication of the habitat park and trail to the State Lands Commission, other public agency or non-profit agency for habitat, public access and passive recreational purposes, and a management and maintenance easement in favor of the homeowners association is the proposed project consistent with the public access and recreation policies of the Coastal Act and the Commission is assured that these facilities will be preserved for these uses and managed and maintained in a manner that is also protective of the adjacent environmentally sensitive habitat areas.

As detailed in the Cultural Resources section of this staff report, the entire Bolsa Chica area as well as the project site has a rich prehistoric and historic past in terms of its use and occupation by Native Americans. Two mapped archaeological sites, ORA-83 and ORA-85 are located on the project site. Although the landowner has received several coastal development permits over the last 20 years to carry out archaeological investigations and data recovery and salvage, the cultural heritage of the site should be recognized and made known to visitors. The applicant proposes that a portion of ORA-83, known as the Cogged Stone site, be placed in permanent open space and accessible to the public as a part of the Eucalyptus Grove ESHA buffer that will be restored with native grassland and preserved. Placing interpretive signage along the habitat trail at the site, as conditioned, informing the public of the rich cultural history also provides partial mitigation for the removal of the cultural resources that were permitted to be removed from the project site consistent with Section 30244 of the Coastal Act.

F. SCENIC AND VISUAL RESOURCES

The Coastal Act seeks to minimize the alteration of natural bluffs and cliffs in the coastal zone in order to protect the scenic views to and along the coast and throughout coastal areas generally. Section 30251 of the Coastal Act states:

Section 30251 Scenic and visual qualities

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

1. Existing Geomorphology and Past Development Activities

The Brightwater residential project site is located on the upper bench of the Bolsa Chica Mesa and the slope between the upper and lower benches. The proposed residual parcel is located on the lower bench, at the toe of the slope separating the two benches (Exhibit 15). Existing ground elevations on the upper bench range from 30-50 ft. above mean sea level (MSL). The surface elevation of the lower bench is 10-30 ft. above MSL. The two benches are separated by a slope approx. 25 ft high with an average gradient of 10-15%. Also at the toe of the slope, running parallel to it, lies the surface trace of the Newport-Inglewood fault, suggesting that the slope is a "fault line scarp", created by differential movement across the fault. According to the Commission's staff geologist, Dr. Mark Johnsson, the Bolsa Chica Mesa is one of the few places in Orange County where a fault line scarp can be observed. Grading and urbanization have destroyed most fault line scarps associated with the Newport-Inglewood fault zone.

The southeastern bluff edge of the project site has a steeper gradient than the slope separating the upper and lower benches. The bluff face averages 45% slope with some areas being near vertical. At the toe of the southeastern bluff edge is the Isolated Pocket Lowland and the EGGW Flood Control Channel. The southeastern bluff was formed by fluvial erosion by the Santa Ana River when its alignment flowed in this part of the lowlands. The natural topography of the Bolsa Chica Mesa has been modified over the past 100 years. Previous activity includes agricultural use, the grading of access roads for the construction of oil wells and oil/gas pipelines, construction (in the early 1940's) and demolition (in the 1990's) of two World War II gun emplacements or concrete bunkers and water cisterns, archaeological investigation, and excavation of portions of the bluff and slope edges to be used for fill for development in the City of Huntington Beach. All of the past development, with the exception of the demolition of the WW II bunkers and the later archaeological investigations, was done prior to the Coastal Act.

Development on the Bolsa Chica Mesa pursuant to coastal development permits approved by the Coastal Commission include, the demolition of the WW II bunkers and water cistern in 1991. Several archaeological investigation and data recovery has also occurred on the Bolsa Chica Mesa pursuant to coastal development permits issued between 1983 and 1990, as detailed in Section I, Cultural Resources, of this staff report.

2. Bluff/Slope Edge Delineation

Commission staff and the applicant spent several conversations and written correspondence dealing with the location of the bluff edge of the upper bench of the Bolsa Chica Mesa. The applicant contends that because of the prior activity on the mesa, including alterations to the slope and bluff edges, that they do not constitute natural landforms. The Commission staff geologist disagreed with this assessment and continued to ask for a delineation of the top-of-slope. In addition, identification of the top-of-slope is relevant to an evaluation of the safety of the proposal irrespective of whether or not the slope constitutes a natural landform. The applicant also argues that the slope separating the upper and lower benches of the Bolsa Chica Mesa is not a bluff. Commission staff geologist concurs in the determination that the slope separating the upper and lower benches is probably not a bluff, given the gradual nature of the slope separating the two benches. A delineation of the top-of-slope for the western edge of the project site would be useful in evaluating various aspects of the project.

The applicant produced a map showing the top-of-slope between the upper and lower benches to be a line drawn part way down the slope. Apparently this line was chosen because it corresponds to an interpolated line that is the top of a steep road cut on the slope. Although staff does not agree that the applicant's line conforms to the top of the actual altered slope, we do agree that the determination of top-of-slope is made difficult by the previous alteration that has resulted in the gradual rounding of the slope. Given the circumstances, the Commission staff geologist indicated that, "it is probably best to determine the slope face on the basis of its measured gradient, which is markedly steeper than the very gentle gradient of the mesas above and below".

The applicant also produced a map containing a delineation of the edge of the river bluff on the southern edge of the upper mesa overlooking the Lowlands. The applicant drew the line using the guidelines of the California Code of Regulations, Section 13577(h)(2). Commission staff geologist review of the applicant's bluff edge delineation found that while there are some small areas of disagreement, there is one major discrepancy. The discrepancy is the area of the large borrow pit where the applicant was previously proposing a 30 ft. high fill slope, approximately two acres in size (Exhibit 15). The applicant places the top of bluff at the outer edge of the cut. However, Section 13577(h)(2) states, that in cases where there is a step like feature that, "... the landward edge of the topmost riser shall be taken to be the cliff edge". Following the above-cited Regulations, Commission staff geologist draws the bluff edge considerably inland of the applicant's line.

3. Proposed Grading

As currently designed, the 105.3-acre upper bench portion of the Brightwater project includes 440,000 cubic yards (cy) of balanced grading. No grading is proposed on the lower bench residual parcel. A breakdown of the grading reveals 220,000 cy of cut and 220,000 cy of fill. The grading plan retains the existing grade differential between the upper and lower benches and also aims to restore the transitional slope to a natural appearance along the proposed native restoration and preserve area, according to the application submittal. No grading is proposed within the existing Eucalyptus grove ESHA, the Los Patos wetlands or freshwater wetland within the burrowing owl ESHA.

The applicant previously proposed grading at the current southerly edge of the bluff overlooking the Isolated Pocket Lowland, now owned by the State of California. The proposed fill would have been located within the applicant's proposed 100-ft wide Eucalyptus grove ESHA buffer. According to the applicant, the upper bench bluff edge grading was proposed in order to "restore" the bluff edge to its 1939 configuration. The bluff was altered in the early 1940's with the construction of two World War II gun embankments and in 1971 with the removal of material from along the slope overlooking the lower bench and the bluff above the Isolated Pocket Lowland. The applicant further stated that the fill was being proposed to support public access; the extension of Bolsa Chica Street, the only public road into the project site, and 30 public parking spaces, which were to be located on the proposed fill slope area. The current application no longer proposes the 30-ft. high fill slope. The applicant has produced a graphic (Proposed ESHA Buffers and Open Space Setbacks, dated January 21, 2005) that correctly shows the edge of the southern bluff, marked as "2000 CCC Top of Bluff".

The majority of the grading work is to smooth out high points and the fill of low points including areas where roads, archaeological investigations and similar ground disturbances have occurred over the years. The proposed grading plan shows that maximum cut is approximately 10 feet and the maximum fill is about 15 feet. The stockpile of crushed concrete that was temporarily stored on site from the demolition of the World War II bunkers and cistern that occurred with a coastal development permit will also be removed. The stockpile is located in the central bluff area, just northeast of the Burrowing Owl ESHA.

The proposed project includes 2-story homes with attached garages immediately adjacent to a proposed public nature trail. Coastal Act Section 30251 protects public views looking to the coast from inland areas but also protects views looking inland from locations along the coast. The homes are also adjacent to a habitat buffer. The homes adjacent to the Eucalyptus Tree and Burrowing Owl ESHA will also be visible from the Bolsa Chica Wetlands, the Bolsa Chica Ecological Reserve, Bolsa Chica State Beach and the Pacific Ocean looking inland. As such, the proposed residential development must be sited and designed to minimize significant adverse impacts on the scenic views from the project site. The Commission therefore imposes a landscaping special condition, special condition 11

and a structural appearance special condition number 20 requiring that the visual impacts of the proposed residential development be softened with the use of appropriate landscaping and exterior treatment of the structures such that they are compatible with the natural setting by using and maintaining primarily earth tones and muted shades Only as conditioned is the proposed development consistent with Section 30251 of the Coastal Act.

G. HAZARDS

Section 30253 Minimization of adverse impacts

New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
- (3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.
- (4) Minimize energy consumption and vehicle miles traveled.
- (5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30253 of the Coastal Act requires that new development minimize risks to life and property in areas of high geologic, flood and fire hazard. The proposed Brightwater development includes approval of a subdivision to create 349 single-family lots and the construction of the homes, a 1.2 million gallon water reservoir, 3.2-acre Southern Tarplant environmental preservation area, 34.2acre habitat restoration and preservation passive park with a decomposed granite pedestrian trail. The active Newport-Inglewood Fault runs along the slope between the upper and lower benches of the Bolsa Chica Mesa (Exhibit 15). In addition, there are many constructed fill and cut slopes on the proposed grading plan

1. Slope Stability Analysis

Commission staff geologist, Dr. Mark Johnsson reviewed the previously proposed grading plan and requested geotechnical information of the applicant in order to determine if the proposed project assures stability and structural integrity, will not contribute to erosion or geologic instability or destruction of the site or surrounding property or require the construction of protective devices that would substantially alter the natural landforms along the bluffs. The applicant's geotechnical consultant performed direct shear tests on relatively undisturbed site samples in order to derive soil strength parameters for use in the

slope stability analyses of the proposed slopes in the project based on the latest grading plan⁹.

The Commission staff geologist concurred with the applicant's previous geotechnical slope stability analyses demonstrating that all proposed slopes would be stable. However, due to the potential for surficial instability, Dr. Johnsson recommended that the applicant abide by the consultant's recommendations contained in one of the submitted reports regarding drainage and landscaping of the slopes.¹⁰ The applicant has not submitted new slope stability analyses for the revised grading plan. Therefore the Commission imposes special condition 18 requiring the submittal of this information for all natural and artificial cut and fill slopes steeper than 2:1. Because the new grading plan is similar to the previous plan that was shown to be stable, there is no reason to believe that the proposed project will not be safe. However, the geotechnical consultant may make additional or different recommendations, given the new OCFA requirement to permanently irrigate the fifty feet nearest the proposed residential lots. The Commission also imposes the typical assumption of risk special condition in recognition of the inherent risks of developing coastal bluffs and slopes. Finally, the applicant's geotechnical consultant must review and certify that all recommendations have been incorporated into the final grading and construction plans that are necessary to assure that the development will not create instability or contribute significantly to erosion or the destruction of the site or surrounding properties or in any way require the construction of protective devices that would substantially alter natural landforms along the bluffs and cliffs of the project area.

No geotechnical information was provided for the proposed 11.8-acre lower bench parcel. The applicant states that the intended use of the parcel is to sale it to the Wildlife Conservation Board, for conservation purposes, with the remainder of its lower bench holdings. The lower bench sale is not included in this application and therefore is not before the Commission so the Commission has no assurance of this. If the 11.8-acre lower bench portion of Parcel 2 will be put into conservation land use, no geotechnical information is necessary. However, as explained above, the area does not need to be subdivided into a separate legal parcel to use it for conservation purposes. If the land were allowed to become a separate legal parcel, the landowner would expect a reasonable economic use of the property. Therefore, the Commission would need detailed geotechnical as well as biological information to be assured that the parcel being created can be developed in a manner consistent with all of the applicable Chapter 3 policies of the Coastal Act. As described below, the Newport-Inglewood Fault Zone runs through the

⁹ Originally the County of Orange approved a grading plan that required 220,000 cubic yards of export and a 40-ft high fill slope on the southeast bluff edge instead of the current 30-foot high slope. The applicant planned to export the material to the adjacent Parkside Estates site in the City of Huntington Beach. When staff requested evidence of approval for the export, the applicant modified the grading plan to balance cut and fill operations on-site.

¹⁰ AMEC Earth and Environmental, Inc. 1997, "Geotechnical evaluation report, Phase I rough grading plans, Vesting Tentative Tract 15460, Bolsa Chica Mesa, South of Warner/Los Patos Avenues, Orange County, California; 60 p. geotechnical report submitted to the Koll Real Estate Group dated 1 December 1997 and signed by D. Dahncke (GE 2279) and S.T. Kerwin (CEG 1267).

proposed residual parcel. Therefore, the creation of the 11.8-acre lower bench residual parcel can not be found consistent with Section 30253 of the Coastal Act.

2. Newport-Inglewood Fault Zone

A portion of the proposed subdivision is traversed by the Newport-Inglewood fault zone, generally recognized as the source of the 6.25 magnitude Long Beach earthquake in 1933 that killed 120 people and resulted in the passage of the Field Act. The fault traverses the gentle slope between the upper and lower benches and the southeastern and northwestern portions of the proposed lower bench residual parcel (Exhibit 15). The fault has also been designated an Earthquake Fault Zone by the State Geologist under the Alquist-Priolo Act. However, the area has not been identified as one susceptible to earthquake-induced landslides or liquefaction hazard on the California Geological Survey Seismic Hazard Map under the Seismic Hazard Mapping Act, according to Dr. Johnsson. In sum, the area immediately surrounding the fault qualifies as an area of high geologic hazard for purposes of Coastal Act section 30253(1).

The applicant has prepared and submitted for Commission staff review the necessary reports, including trenching and mapping, pursuant to the Alquist-Priolo Act. The studies verify that the North Branch Fault (of the Newport-Inglewood Fault Zone) is considered active. The surface trace of the fault was identified through detailed trenching and mapping, and a 50-foot setback from all fault traces was identified in accordance with the Alquist-Priolo Act, that prohibits structures for human habitation to be built across an active fault. Commission staff geologist's review of the fault data shows that the fault seems to be well established at its present location. Dr. Johnsson concurs that the 50-foot setback is adequate for the proposed upper bench residential development given that no residential lots of the subdivision abut the mapped fault setback line.

As shown in Exhibit 15, the active earthquake fault traverses the southern 500 and approximately 1,000 ft. of the northern portion of the proposed irregularly shaped 11.8-acre lower bench residual parcel. Coastal Act section 30253(1) requires that new development minimize risks to life and property in areas of high geologic hazard. The creation of the residual parcel is new development that would make further structural development possible on the new parcel. As stated, no geotechnical information has been provided for the proposed new parcel. For this reason, among others, staff recommends that the Commission deny the creation of this lower bench parcel given its seismic hazard constraints and lack of geotechnical information demonstrating that the parcel can be developed consistent with the geologic hazard and all other applicable Chapter 3 provisions of the Coastal Act.

3. Hydrology

The previous Brightwater project proposed a vegetated water quality treatment system (VTS) including a series of five proposed treatment wetlands, an existing freshwater wetland and a proposed 1.3-acre detention basin to treat low flow and stormwater runoff prior to discharging it to an existing 24-inch stormdrain emptying into the Isolated Pocket Wetlands below the project site. Due to the system's impacts on Southern Tarplant and the burrowing owl ESHA, it has been eliminated from the current proposal. The current water quality management plan replaces the previous VTS and existing 24-inch corrugated metal pipe with a new 66-inch reinforced concrete pipe with an internal energy dissipater in the outlet and 20 feet of rip-rap below the outlet. Except for about 8 acres, the surface runoff from the developed site will be collected and directed to the Bolsa Chica Wetlands through this new pipe. Section 30253 of the Coastal Act also requires that new development minimize risks to life and property in areas of high flood hazard. The stormwater runoff from the project site under the developed condition could have potential flooding impacts on the adjacent Isolated Pocket Wetland area to which it drains.

A hydrologic study, Preliminary Hydrology Study for the Brightwater Development, dated September 2001 and revised December 2004, by The Keith Companies calculated the volumes and discharge velocities of the 2, 5, 10 and 100 year storm events expected for the proposed project. The study shows that the discharge velocity at the end of the new 66-inch pipe, corresponding to a 10-year storm event, is 4.8 feet per second, which should be non-erosive, if discharged onto a rip-rap energy disperser as proposed. The volume of water discharged to the Bolsa Chica Wetlands during a 100-year storm event increases from 34 acre feet in the existing condition to 39.4 acre feet in the developed condition. The additional 5.4 acre feet will be discharged into an area of about 40 acres, which would result in less than two inches of additional water during a 100-year rainfall event. Accordingly, both the discharge velocity and the increase in the volume of water discharged to the Wetlands as a result of the development should have no adverse impacts to the Wetlands. The State Lands Commission as well as other members of the eight agency Steering Committee overseeing the Bolsa Chica Wetlands Restoration effort has reviewed the new water quality treatment proposal. They concur with the assessment that the new proposal will not cause any significant adverse impacts to the wetlands.

H. MARINE RESOURCES – WATER QUALITY

New development can have significant adverse impacts on coastal water quality and biological productivity, if adequate erosion and runoff control measures are not properly designed and implemented during grading and construction. New development can also adversely affect water quality after construction if permanent pollution prevention, reduction and treatment measures are not provided and maintained for the life of the development. Sections 30230 and 30231 of the Coastal Act require the protection of

marine resources by protecting the quality of coastal waters. Specifically, these policies require:

Section 30230 Marine resources; maintenance

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 Biological productivity; water quality

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The 105.3 acre Brightwater project site is to consist of 349 single family residences, a 1.2 million gallon underground drinking water reservoir, public streets and sidewalks, two small public parks and 37 acres of open spaces area. The impervious surfaces and activities associated with this scale of residential development represents a potentially significant impact to coastal resources, including portions of the Bolsa Chica wetlands, Huntington Harbor and ocean waters. The County of Orange required the preparation of a hydrology/water quality study in the review of the project at the local level. The applicant also prepared a Master Drainage Plan, Storm Water Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP). These documents and revisions were submitted to Commission staff and reviewed by the Commission's Water Quality Unit.

The Brightwater development site is currently undeveloped and no off-site drainage flows onto the site. The mesa is vegetated with primarily non-native grassland, ruderal vegetation and several vegetated ESHA. There are also approximately 17 acres of dirt roads or other non-vegetated areas on the site. The hydrology study evaluates the existing hydrologic condition and divides the site into several drainage areas (Exhibit 7, Existing Hydrology). The majority of the project area drains to the south under existing conditions to depressional areas that act as detention basins. During larger rain events, runoff flows to the Isolated Pocket Lowland via an existing 24 inch corrugated metal pipe (CMP) southeast of the project site. The Isolated Pocket Lowland area is located between the EGGW Flood Control Channel (EGGW FCC) and the project site, and currently has no direct connection to the ocean. The Isolated Pocket Lowland area now belongs to the State and will be restored as part of the Bolsa Chica Wetlands Restoration Project. In the current wetland restoration plan, the Isolated Pocket Wetland will be connected to the EGGW Flood Control Channel through a culvert allowing salt water to enter the Isolated Pocket Wetland on a regular basis, but with a reduced (muted) tidal range.

The Brightwater development previously proposed to treat runoff from the 85th percentile storm events and dry season flows on-site by diverting runoff to a treatment wetland or Vegetated Treatment System (VTS) consisting of series of five freshwater ponds located within the proposed upland habitat park on the slope separating the upper and lower benches. The proposed treatment wetlands and associated detention basin have been eliminated from the Water Quality Management Plan under the current project because they were to be located within the burrowing owl environmentally sensitive habitat area (ESHA) and would have impacted significant populations of the Southern Tarplant. Under the current proposal an underground media filter system will treat all of the runoff from all storms up to and including the 85th percentile storm event and the first flush from larger storms. Where the previous WQMP proposed sending dry weather flows to the VTS for infiltration or evaporation, the current plan proposes to minimize these flows using efficient irrigation and sends any remaining dry weather flows to the sanitary sewer. Most of the impervious areas that were previously proposed in the nature park (a 12 ft. wide, approximately 3,500 ft. long paved pedestrian/bicycle trail, the extension of Bolsa Chica Street at 32 ft. in width, and 30 parking spaces) have now been eliminated. Now the only non-vegetated area in the 34-acre passive habitat park will be a 6-foot wide decomposed granite trail. The previously proposed VTS may have provided some additional benefits (e.g., wetland habitat, scenic values and groundwater infiltration), beyond the currently proposed underground media filter system, but could not be implemented on the surface area available without impacting existing habitat.

The applicant now proposes to consolidate runoff from 92% of the developed land to a single drainage area (Drainage Area B, see Exhibit 8, Proposed Hydrology) and provide an underground media filter system underneath one of the three pedestrian walkways leading to the habitat park. As proposed, the treated runoff will be discharged to the sanitary sewer during dry weather and to the Isolated Pocket Wetland during wet weather. The modifications will reduce the runoff to Huntington Harbor by 75% and all the remaining runoff that flows to the harbor from developed streets will be treated, thus reducing potential impacts to a water body that is listed by the state as impaired for copper, nickel, Dieldrin, PCBs and pathogens. Catch basin media filters will treat the remaining runoff to Huntington Harbor (Drainage Area A). Moreover, all developed areas of the project will have standard structural and non-structural best management practices (BMPs) as indicated in the Brightwater Water Quality Management Plan dated January 21, 2005.

The Water Quality staff of the Coastal Commission reviewed and evaluated the WQMP to determine whether it met its stated goals and whether it was in conformity with the marine resources protection policies of the Coastal Act (Exhibit 9). The Water Quality Unit concluded that the WQMP could significantly reduce the discharge of polluted runoff from the development, if certain necessary and feasible modifications were made to the overall treatment program being proposed. However, as proposed in the January 21, 2005 version of the WQMP, there were several inconsistencies with Sections 30230 and 30231 of the Coastal Act.

1. Erosion Control Plan

The applicant has submitted a draft Storm Water Pollution Prevention Plan (SWPPP) dated January 21, 2003. This document provides conceptual plans for erosion, sedimentation and polluted runoff control during the construction phase of this project as it was described at that time. The draft SWPPP was developed to assist the applicant in responding to the California State Water Resources Control Board (SWRCB) Order No. 99-08 DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity (Construction Storm Water Permit). While submittal of SWPPPs to the SWRCB is required by the Construction Storm Water Permit, and while construction projects are required to have a SWPPP on site, the SWPPP may or may not be reviewed by the Regional Water Quality Control Board staff. In addition, the Construction Storm Water Permit only requires that the SWPPP be complete prior to the start of construction.

In order to adequately review project efforts to control erosion, sedimentation and polluted runoff during the construction phase, the Coastal Commission requires submittal of a plan (Erosion Control Plan) prior to the issuance of the Coastal Development Permit that describes all construction phase BMPs required to conform to the mandates of California Coastal Act Sections 30230 and 30231. In order to minimize duplication of effort, this plan should incorporate the most recent version of the SWPPP, as well as any additional BMPs required to address site-specific coastal resources. This Erosion Control Plan must also be approved by the local jurisdiction as being in compliance with the local stormwater requirements. In order to ensure that construction phase BMPs conform to the mandates of California Coastal Act Sections 30230 and 30231, Condition 8 requires that the developer submit an Erosion Control Plan, that conforms to the requirements of this permit, incorporates the most recent version of the SWPPP and has been approved by the County of Orange prior to issuance of the Coastal Development Permit.

2. Water Quality Management Plan

Structural BMPs proposed by the project developer in the January 21, 2005 version of the WQMP include: an underground media filter system sized to treat the 85th percentile storm event for 92% of the developed area of the project; dry weather diversion of treated water to the sanitary sewer system; catch basin media filters on the remaining portion of the site draining to Huntington Harbor; efficient irrigation for common areas; runoff minimizing landscape design for common area; energy dissipating riprap at new stormdrain outlets and inlet trash racks. The non-structural BMPs include: education for property owners, tenants and occupants; activity restrictions (e.g., no auto repairs or oil changing on site, no discharge of landscaping debris to storm drains, no clean up from painting in paved areas, no washwater from construction activities into stormdrains); common area landscaping maintenance; BMP maintenance requirements; common area litter control; catch basin inspections; and requirements for regular street sweeping.

The WQMP proposes to treat project runoff draining to Huntington Harbor (Drainage Area A) using catch basin media filters. Catch basin media filters are proposed because this

area is constrained by steep slopes, limited area and does not drain towards the large media filters in Area B. The WQMP indicates that the catch basin media filters will be designed to treat the runoff for suspended solids, oil and grease, and heavy metals, but does not specify the capacity of the BMP. The Coastal Commission finds that flow-through BMPs should be sized to treat the 85th percentile 1-hour storm event with a safety margin of 2 or greater in order to maintain marine resources and to avoid diminishing biological productivity or water quality to a level that would reduce populations of marine organisms below optimum levels or endanger human health. In order to ensure that catch basin media filter BMPs conform to the mandates of California Coastal Act Sections 30230 and 30231, Condition 16.A.1.c requires that the developer meet the sizing criteria above and Condition 16.A.2 requires that the developer shall use a filter media that meets performance expectations in removing the pollutants named above.

Various individuals, organizations and agencies expressed concerns over the Brightwater WQMP as proposed in October 2004. Those concerns are addressed either here or in answer to the letter from the Orange County Coastkeeper below. The concerns include:

- potential adverse impacts to the Isolated Pocket Lowland wetlands due to the volume of the project freshwater flows;
- that the WQMP does not provide information on total loading or potential adverse cumulative impact caused by use of pesticides, fertilizers and other chemicals by individual homeowners and the impacts of animal waste; and
- that low flows should be diverted to the OC Sanitation District treatment plant.

Concern has been expressed about potential impacts of stormwater runoff may have in reducing halophytic plants and encouraging brackish or fresh water plants in the adjacent State-owned Isolated Pocket Lowlands, especially given the extensive 1,100-acre Bolsa Chica Wetlands Restoration Project (Restoration Project). When the applicant sold the Isolated Pocket Lowlands area to the State the applicant retained a drainage easement to accommodate the flows from the proposed development. However, the discharge must be done in a way that it does not adversely impact water quality or the biological productivity of the wetlands. During review of the Vegetated Treatment System (incorporated in the previous WQMP) staff discussed these concerns with personnel from the Bolsa Chica Steering Committee who commented that they were aware of the Brightwater project and did not object to the proposed discharge to the Isolated Pocket Wetland area. Further, the Steering Committee felt that the low freshwater volumes into what will be muted tidal habitats would create very localized, but beneficial, biological diversity and are not likely to contribute contamination. The Steering Committee is aware of the modifications to the January 21, 2005 version of the WQMP and has no objections to the current plan. The new plan was reviewed and approved by the landowner, the California State Lands Commission.

Concerns about potential adverse cumulative impact caused by use of pesticides, fertilizers and other chemicals by individual homeowners and the potential effects of animal wastes are valid and these pollutants are a potential problem throughout our coastal communities. In response to these concerns, the WQMP includes both non-structural and structural BMPs such as education for property owners, tenants and occupants; common area landscaping maintenance; common area efficient irrigation to minimize runoff; common area litter control; catch basin inspections; media filtration; low flow diversion and requirements for regular street sweeping to deal with these issues. The homeowner education BMP is intended to make individuals aware that misuse of water and household chemicals can have harmful impacts on the nearby wetlands, harbor and ocean. The underground media filtration system in combination with the other BMPs are an effective system for minimizing the impacts of irrigation runoff, pesticides, fertilizer and pet wastes, especially in combination with source control of these pollutants through best management practices in the common areas and private areas of the development. In addition, if the proposed low flow diversion to the sanitary sewer is implemented, many of these pollutants will be further reduced through the wastewater treatment process. In sum, in reliance on the professional judgment of the Commission's Water Quality Unit, the Commission concludes that the total additional loading of pesticides, fertilizers and other chemicals and the impacts of animal waste will not have a significant adverse impact on marine resources, coastal water quality, or biological productivity.

The current project does propose to divert dry weather flows to the sanitary sewer. While such diversion has occurred for several major residential developments in Southern California over the past few years, it has not been generally required by the water quality agencies or by the Commission for several reasons. In some cases, diversion can be a quick fix to beach water quality problems, but it is an end-of-pipe solution that tends to de-emphasize the responsibility of upstream landowners to control sources of pollution and maintain site hydrology near natural conditions. In addition, diversion of first flush runoff to a sewage treatment plant would require the governing board for the plant to find that there is adequate capacity to treat the additional water. As sewage treatment plants approach their design capacity, governing boards can be expected to refuse to treat urban runoff if that would reduce their capacity to treat residential sewage. Moreover, although sanitary sewer diversion can be effective, there is no evidence at this time that it should substitute for a comprehensive system of best management practices implemented throughout a project in order to meet the requirements of Coastal Act Sections 30230 and 30231.

- A letter, dated March 8, 2005, from the Orange County Coastkeeper, raised concerns about the water quality plan provisions of the current project (Exhibit 29) including: that the underground media filtration system should include additional storage to detain and treat greater volumes of water than the runoff of the 85th percentile storm event;
- that the developer should use the latest technologies available for the catch basin media filters;

- that the developer should agree to install smart sprinkler controllers on single family houses;
- that the WQMP should include a monitoring plan to evaluate the water quality system effectiveness and determine if it complies with numeric effluent discharge standards;
- that the monitoring plan should measure the results in the pipe and not in the receiving waters; and
- that the responsibility for maintenance of BMPs and education of homeowners be included in the property Conditions, Covenants and Restrictions (CC&Rs) or other governance structure to ensure that the water quality protections are adequately addressed many years into the future.

The Orange County Coastkeeper (Coastkeeper) is concerned that the underground media filter system BMP will bypass storms larger than the 85th percentile design storm and recommends that the project include additional storage capacity for stormwater. Although treating more stormwater or detaining stormwater for longer periods may have some water quality benefits, the Coastal Commission, Regional Water Board and other authorities have determined that the 85th percentile storm event is the point where the cost of additional treatment outweighs the benefits. Moreover, there is no evidence that, by limiting the size of the underground media filter system to the 85th percentile design storm, the project will result in an increase in pollution that will degrade marine resources, which is the standard for Coastal Act purposes, or otherwise violate the requirements of Sections 30230 and 30231. In fact, the evidence presented indicates just the opposite – that the proposed system will satisfy the requirements of those sections by maintaining marine resources and will not diminish biological productivity or water quality to a level that would reduce populations of marine organisms below optimum levels or endanger human health.

The Coastkeeper is also concerned that the catch basin media filter treatment technology to be used on the drainage to Huntington Harbor is not adequate. They indicated in their letter and a phone conversation that a previous version of the WQMP specified an outdated technology. Condition 16.A.2 will also specify that the final design of the catch basin media filter BMP selected by the developer will be submitted to the Executive Officer for review, prior to permit issuance.

The Coastkeeper recommended that the developer install "smart sprinkler controllers" on the individual lots of the development. These "smart sprinkler controllers" adjust the amount of irrigation based on sensors that measure current weather and soil conditions. The applicant is proposing "efficient irrigation" in common areas of the development (but not on individual lots) to avoid excess runoff and diversion of dry weather nuisance flows to the sanitary sewer. Efficient irrigation is described in the WQMP as including, at a minimum: water sensors; properly adjusted irrigation heads; irrigation timing and cycle lengths adjusted to water demands; and grouping plants with similar water requirements.

The WQMP indicates that the irrigation system will be designed and operated based on the requirements of the California Model Water Efficient Landscape Ordinance (June 15, 1992).

Addition of a requirement for smart sensors and the other aspects of efficient irrigation on individual lots would minimize dry weather flow from both common and private portions of the development and minimize freshwater discharge to the Isolated Pocket Wetland during the dry season. This would create the treatment system discharge conditions that had been planned during the design of the previously proposed Vegetated Treatment System (i.e., no freshwater flow to the Isolated Pocket Wetland during the dry season). In order to eliminate dry weather flow the current WQMP proposes to divert any dry weather runoff to the sanitary sewer.

Even though the applicant does plan to divert the dry weather runoff to the sanitary sewer, efficient irrigation on private lots would still serve a valuable purpose since it would reduce the volume of diverted flows and reduce the time that irrigation systems would operate during or after rain events. And the efficient irrigation would add redundancy to the water quality protection system in case the sanitary sewer district is not able to accept the diverted runoff. While efficient irrigation systems or smart sprinkler controllers are more expensive than standard systems, the costs can be reduced by installing the systems during initial landscaping and by sharing the costs of sensor installations.

While the inclusion of smart sprinkler controllers on private lots would be an improvement to the overall water quality program, it does not appear to be required for the project to conform to the mandates of California Coastal Act Sections 30230 and 30231, as long as the dry weather runoff is diverted to the sanitary sewer. In order to ensure that the project conforms to the mandates of California Coastal Act Sections 30230 and 30231, Condition 16.A.3 requires that the developer divert dry weather runoff to the sanitary sewer or minimize dry weather runoff to the extent practicable by extending the efficient irrigation system and smart sprinkler controllers to individual lots.

Concerns about the need for a monitoring program or a quantitative estimate of the total loading of pollutants to the waters downstream are related in that they presume that the quality of runoff is regulated by quantitative regulatory standards, such as a waste load allocation. In fact, at this time, the control of polluted runoff nationwide and in California is primarily regulated by requiring dischargers to use nonstructural and structural Best Management Practices (BMPs) to reduce the discharge of pollutants to the maximum extent practicable. Few municipal stormwater permits contain numeric effluent standards or require site-specific monitoring. Thus, the Regional Water Boards have not developed generally applicable, quantitative standards for nonpoint source pollution that could be applied or enforced by other agencies, including the Commission.

The strategy of requiring structural and nonstructural BMPs is a significant step towards dealing with polluted runoff; a water quality problem that is widespread, caused by the actions of many people and where responsibility cannot be readily assigned to specific

parties. A large variety of BMPs have been approved by federal and state agencies for their ability to reduce the pollutants that are found in polluted runoff. The suite of BMPs considered appropriate for California are found in the California Stormwater Quality Association (CASQA) BMP handbook. While the Coastal Commission has, on occasion, required monitoring of discharge from specific developments, this has been in response to the proposed use of management practices that are not designed to the specifications in the CASQA BMP handbook due to site-specific conditions or innovative methods in need of additional information to document effectiveness.

In addition, the WQMP does indicate that there will be a performance-monitoring program allowing Coastal Commission staff, as well as Regional Water Board staff, to evaluate the effectiveness of the filter media and recommend any needed improvements. The monitoring program will test the water quality entering and leaving the new media filter system for three storms per year over a three-year period. If the Regional Water Board finds that the discharges from this development may be causing receiving waters to fail state standards, that agency can require additional monitoring at any time and, based on the information collected, take further actions to address the problem.

A specific concern of the Coastkeeper is that the water quality samples taken at the outlet of the underground media filter system be taken "in the pipe" and before the discharge mixes with receiving waters. This will allow for a better evaluation of the effectiveness of the BMP, since the sample will not be diluted or mixed with untreated water. While this sample location was not specified in the WQMP, the water quality consultant for the developer, provided additional information in a February 11, 2005 email on monitoring locations, analytes, analytical methods, filter media, and BMP maintenance responsibilities, that has not yet been included in the WQMP. The consultant indicates that monitoring downstream of the underground media filter system will be "at the proposed storm drain outlet", which seems to indicate that it is prior to mixing in receiving waters. In order to ensure that the project conforms to the mandates of California Coastal Act Sections 30230 and 30231, Condition 16.B requires that prior to issuance of the permit the developer shall provide a detailed water quality monitoring plan designed to evaluate the effectiveness of the project structural BMPs (both the underground and catch basin media filters) and it shall include a monitoring point at the outlet of the BMPs and prior to mixing with other runoff or receiving waters.

The Coastkeeper recommends that the responsibility for the long-term management, operation and maintenance of the WQMP (including structural BMPs and non-structural BMPs, such as education of homeowners) be included in the property Conditions, Covenants and Restrictions (CC&Rs) or other governance structure. Their concern is that BMP maintenance and water quality education are "beyond the working knowledge and expertise of a typical Homeowners Association (HOA) Board of Directors". In addition, without a formal commitment, other competing needs (e.g. maintenance of common areas) may cause a reduction in coastal water protection over time.

The water quality consultant for the project has indicated that the underground media filter system will be constructed by Stormwater Management Inc. and that "The HOA will have financial responsibility for maintenance of the media filters, but it is unlikely that they would be doing the physical maintenance. They indicate that the HOA would probably be contracting the work out, and due to the proprietary nature of the media filter, Storm Water Management, Inc. would be the only one capable of performing the work."

While it is reassuring that the maintenance of the primary structural BMPs will be conducted by knowledgeable professionals, evidence that the WQMP will be fully implemented over the life of the project is needed. CCC water quality staff agrees that the additional safeguard of a long-term governance structure is necessary for long-term water quality protection and that that a description of this structure needs to be included in the WQMP. Evidence of the governance structure needs to be presented to the Executive Officer for his approval prior to permit issuance. In order to ensure that the project conforms to the mandates of California Coastal Act Sections 30230 and 30231, Condition 16 requires that prior to issuance of the permit the developer shall provide evidence of a governance structure that ensures the full implementation of the WQMP for the life of the project, including proper management, operation, and maintenance of the structural BMPs and ongoing education of homeowners.

In conclusion, Commission Water Quality Unit staff has reviewed the WQMP dated January 21, 2005 and supporting documents as listed above. Based on those documents, the Coastal Commission concludes that if the permit is conditioned to require additional assurances that the catch basin media filter BMPs to be used are properly sized and designed for the expected pollutants of concern; that the monitoring plan is adequately implemented to evaluate BMP effectiveness; that the dry weather flow is diverted or the dry weather runoff is minimized by adding efficient irrigation on individual lots; that BMP maintenance is performed by trained professionals; and that implementation of the WQMP including BMP maintenance is mandated in the project CC&Rs for the life of the project, then the water quality aspects of this project would appear to be consistent with Sections 30230 and 30231 of the Coastal Act. Only as conditioned can the proposed Brightwater development protect water quality and marine resources pursuant to Sections 30230 and 30231 of the Coastal Act.

I. CULTURAL RESOURCES

Section 30244 of the Coastal Act protects cultural resources in the coastal zone and states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Coastal Act Section 30244 states that reasonable mitigation measures shall be required where development would adversely impact identified archaeological resources. The applicant contends that the Brightwater development project will not adversely impact either of the two on-site identified archaeological sites due to the fact that a series of measures to mitigate the impacts of future development have been implemented completely in the case of ORA-85, and at the time of the October 2004 hearing, 97% complete in the case of ORA-83¹¹ as approved by the County of Orange, and the Coastal Commission. The coastal development permits and other actions that have been taken by the Coastal Commission for ORA-83 and ORA-85 are reviewed below. Despite the fact that approvals were obtained from the County and the Commission for complete recovery of cultural resources, as proposed by the applicant, and archaeological testing and recovery work has been on-going since the mid-1980's, under these permits, there still remains considerable opposition to removal of the cultural resources of ORA-83.

During the preparation of the staff report for the October 2004 hearing, Commission staff received several letters from archaeologists, including university professors, and several letters from environmental groups, Native Americans, and individuals calling for the preservation of ORA-83, even though they are aware that a full recovery program for the site has long since been approved. Staff received a copy of a 1999 letter from the head of the archaeology division of the Smithsonian National Museum of Natural History supporting the preservation of what remains at ORA-83 and a 2001 letter from Congresswoman Loretta Sanchez supporting the listing of ORA-83 in the Federal Register as a National Historic Site. Some request that the site be capped and left as open space after the data has been recovered, instead of allowing residential development at the site of an identified prehistoric and historic cultural resource. While others suggest that further destruction of ORA-83 be avoided, relocation of proposed development away from ORA-83. Yet others assert that recent mechanical excavations at ORA-83 have revealed the presence of numerous semi-subterranean house pit features at the base of the site, beneath the midden deposit and contend that this feature represents a new, significant area of needed research. Although the Commission approved the full recovery of ORA-83 as proposed by the applicant in the previous permits listed below, the Commission finds no evidence in the record of those permits at the time of their approvals that the "semi-subterranean house pits" were known or expected to exist, beneath the shell midden.

The July 10, 2003 brief update statement by the applicant's archaeological consultant, signed by the three current peer reviewers stated that, "The Peer Review Committee members, over the last several years, have overseen the nature of the ongoing phases of the Ora-83 site investigation and had made recommendations on strategies appropriate to address the unusual breadth of the emergent field discoveries." The update further states

¹¹ "Archaeological Site CA-ORA-83: The Cogged Stone Site, Synopsis: A History of Archaeological Investigations, Nancy Anastasia Desautels, Ph.D, Scientific Resources Surveys, Inc., Project No. 926, April 28, 2003.. "Archaeological Site CA-ORA-85: The Eberhart Site, Synopsis: A History of Archaeological Investigations, Nancy Anastasia Desautels, Ph.D, Scientific Resources Surveys, Inc., Project No. 926, September 2003.

that the “special new topics” evolving at Ora-83 include, “describing and evaluating the patterns of the multitude of semi-subterranean ‘house pit’ features revealed.” Professor Pat Martz, a past member of the California State Historical Resources Commission states in revisions to her 2001 nomination of ORA-83 for listing on the National Register of Historic Places to the State Historic Preservation Officer, that house pit structural features are rarely found in Southern California and are extremely rare since the site was occupied during the Early Holocene/Millingstone Horizon of California prehistory. Semi-subterranean house pits are large circular depressions that were excavated below the surface a few feet and framed with poles and then thatched. Under normal climatic conditions (not consistently dry, or consistently wet) organic materials would not preserve. It is likely that the house pit structures would have a hard packed floor, post-holes and a hearth. Professor Martz contends that these house pit features are probably still present at the base of the site and that these semi-subterranean house pits have the potential to address important questions regarding village structure, social organization, settlement patterns, gender activities, and demographics, as well as relationship of the structures to astronomical features.

In November 2004 Commission staff accompanied the applicant and their consulting team on the project site to revisit a number of issues that had been raised at the October 2004 Commission meeting. At that time staff verified that the house pits had all been excavated and backfilled.

Archaeologists have recognized the astronomical significance of numerous archaeological sites in Southern California for more than 25 years and celestial observations have been conducted at several archaeological sites. Recently, among both scientists and Native Americans, there has been a growing interest in studying ORA-83 to determine if the site was a key location in the complex spiritual/philosophical system of knowledge regarding the Cosmos held by prehistoric Native Americans. Beginning in 1994, a Cogged Stone Site study team, made up of scientists and Native Americans, has tested its astronomical research design for ORA-83 several times. The According to Dr. Martz, the team proposed that the view from the elevated mesa encompasses geographic features that ethnographic data suggest may have functioned as cyclical astronomical alignments such as Catalina Island to the southwest and Point Fermin Heights to the west. The team discovered that the sun sets over West End Point of Santa Catalina Island for three days in late December, signaling the winter solstice, and that it rises directly over the Point Fermin Heights to indicate the spring and fall equinoxes. The Commission has found no evidence in the record of the previous permits that the approved mitigation measures were for impacts to archaeoastronomical resources.

A Native American from the Band of Luiseno Mission Indians, representing the Maritime Shoshone, Inc, a not-for-profit Native corporation, has sought to preserve a 7.4acre portion of ORA-83 for its archaeoastronomical value. In Ms. Jeffredo-Warden’s May 2004 nomination submittal to the State Historic Preservation Officer for listing of the site on the National Register of Historic Places she states that the archaeological and archaeoastronomical data obtained at the CA-ORA-83 site, dated to from 8,660 to 1,098

RYBP, evidently constitutes, in addition to the earliest reliably dated observatory site in North America, one of the earliest fixed astronomical observation points in the world. Ms. Jeffredo-Warden is also requesting that the Coastal Commission preserve a 7.4-acre portion of ORA-83 in order to conduct additional astronomical tests and to do further research on the site as well as the preservation of the existing site contours to preserve the existing solstitial alignments and Ms. Jeffredo-Warden submitted a copy of the nomination to the Commission. A letter was received from Senator Diane Feinstein, dated August 4, 2004, urging the Commission to fully consider the concerns raised by Ms. Jeffredo-Warden regarding appropriate mitigation for cultural resources of ORA-83. Several letters of support of the archaeoastronomical resources preservation were received from professors of archaeology, the director of the Griffith Observatory and the International Indian Treaty Council (these letters are attached as exhibits as well as the public portion of Ms. Jeffredo-Warden's nomination of the site to the State Historic Resources Commission).

On November 5, 2004 the State Historic Resources Commission conditionally moved to recommend that the State Historic Preservation Officer submit the nomination to the Keeper of the National Register for a determination of CA-Ora-83's eligibility for inclusion in that register (Exhibit 13). The November 5th action went on to say that, "The Commission agrees that the property is eligible at the national rather than the state level of significance" and then set out five conditions that need to be met, including the completion of the revisions and the submittal of the registration form to the Keeper no later than May 5, 2005. The third condition of the motion dealt specifically with the significance of the site as a prehistoric archaeoastronomical observation point, stating that the case should be made more of a consideration rather than a major aspect of the property's significance (Exhibit 13).

The applicant has submitted several letters in rebuttal to the statements of the archaeoastronomical significance of the site. The applicant contends that several studies, over a period of years, were done and no archaeoastronomical significance was found to exist on the site. The applicant's archaeologist has submitted a letter to this effect, signed by the three peer reviewers, agreeing that the project site was found to possess no archaeoastronomical significance. Ms. Jeffredo-Warden has countered that neither the applicant's archaeologist nor any of the three peer reviewers have expertise in this field.

Pursuant to Section 30244 of the Coastal Act the Commission must decide whether the proposed project would adversely impact identified archaeological resources. If such a finding is made, reasonable mitigation measures shall be required. As stated above, and as detailed below, the Commission has granted the applicant and previous land owners several coastal development permits to carry out extensive archaeological research, testing and full recovery of ORA-83 and ORA-85. Though some features were not specifically discussed in the research design application submittals the Commission peer review committee required the Commission often requested that the applicant to carry out additional investigations to ensure that no resources were overlooked in order to get a full understanding, as much as possible of the past. The applicant is proposing to leave in

open space that portion of ORA-83 that lies within their proposed Eucalyptus Tree and Burrowing Owl ESHA buffers. The area would become a part of the proposed coastal sage scrub and native grassland habitat creation and monitoring plan and include a public trail and fuel modification in the upper portions. A significant portion of ORA-83 is within the staff recommended 328 foot (100-meter) wide Eucalyptus grove ESHA buffer. Therefore if the Commission requires that this area be preserved as open space to protect the raptors that use the Bolsa Chica Mesa as detailed in Section D of this staff report, the majority of ORA-83 will be preserved. Further, Exhibits 18, 19, and 22 and 23 are letters from Native Americans, including the Acjachemem Nation, Ancestor Walk Coordinator, and from the president of the California Cultural Resources Preservation Alliance (CCRPA), an alliance of American Indian and scientific communities working for the preservation of archaeological sites and other cultural resources. They request the Commission impose a 100 meter setback or "the greatest open space possible". The Commission finds that the additional open space area being required for habitat protection purposes under Section 30240 of the Coastal Act can also serve to further protect the area previously used as a prehistoric and historic archaeological site and is therefore consistent with Section 30244 of the Coastal Act.

The Native American Heritage Commission sent a letter to the Commission during its October 2004 deliberations requesting that that the Brightwater project includes interpretive signage along the Mesa detailing the area's prehistoric and historic history. Finally, the above letters also request signage concerning the Native American past of the site as well as dissemination of the wealth of knowledge that has been gained over the two decades of study at the site and curation of the appropriate portions of the artifacts recovered from the site. Only as conditioned to place appropriate interpretive signage along the public trail informing the public of the cultural resources of the area, to disseminate the series of required final reports to institutions and interested groups, to curate the artifacts recovered from the site in a facility in Orange County meeting established standards, and to have an archaeologist and Native American monitor present when grading operations commence to ensure that if any additional cultural resources are found there are procedures in place to go about determining the significance of the resources and to ensure that work can proceed without adversely impacting archaeological or paleontological resources.

Description and Status of ORA-83

ORA-83 is 11.8 acres in size and is located at the southeastern bluff edge of the Brightwater. ORA-83 is commonly known as the Cogged Stone Site, and consists of a shell midden. Cogged Stones are unusual artifacts that are manufactured and used in ceremonial practices. More Cogged Stones, over 400 or roughly half of the total found, have been found on ORA-83 than any other site and are thought to have been distributed throughout coastal and near-coastal California. Similar stones have also been found on the coast of northern Chile. It is also believed that the Cogged Stone site served as a ceremonial center and a center for the manufacture of the Cogged Stones. ORA-83 has been twice found by the State Historical Resources Commission to be eligible for listing in

the National Register of Historic Places. However, the listing has been declined by the property owner.

According to the applicant's archaeological consultant, the site was 97% recovered at the time of the application submittal for the October 2004 hearing. Based on staff observations in November 2004 the site appears to be virtually 100% recovered

Description and Status of ORA-85

ORA-85, the Eberhart Site is described by Dr. Desautels of Scientific Resource Surveys, Inc. (SRS), as a shell midden located on the western edge of the Bolsa Chica Mesa. Knowledge of the Eberhart site has existed since the 1920's. Based on the numerous investigations of the site carried out by other researchers beginning in the mid-1960's and by SRS beginning in the 1980's, the Eberhart site was determined to be a residential base or village and was not a limited special-purpose shellfish gather and processing station. No evidence of ceremonial or other structures were found. Other than four quartz crystals, which may be evidence of ceremonial utensil manufacture, no obvious objects associated with religious ceremonies were recovered. Finally, no evidence of human remains in the form of burials or cremations was found. However, over 2,000 artifacts, more than 1,500 fire affected rock, and thousands of faunal remains have been recorded at the site. Although analysis of the recovered material had not been completed as of September 2003, the applicant states that the approved testing and data recovery program approved by the Coastal Commission concerning ORA-85 in 1989 was completed in 1991. .

Past Coastal Commission Action Concerning Archaeological Resources on or Adjacent to the Brightwater Project Site

The Coastal Commission reviewed and approved several coastal development permits and permit amendments for archaeological activity on and adjacent to the project site beginning in the early 1980's. The Commission also acted on a revocation request of one of the coastal development permits for activities within ORA-83 in 1999. Additionally, in 1994, at the request of the City of Huntington Beach, the Executive Director undertook an investigation and made a report to the Commission concerning ORA-83. The Coastal Development Permit actions and Executive Director report are reviewed below:

5-83-984

The first coastal development permit for archaeological activity on the project site was permit 5-83-984, granted to Signal Landmark on April 11, 1984 for Phase I of "Final Research and Data Recovery Program" on ORA-83, known as the Cogged Stone Site. . The archaeological testing program was a five-step program which involved (1) an extensive survey and evaluation of all recorded prehistoric sites (done in 1970); (2) a series of archaeological test excavations (done between 1971 and 1975); (3) an evaluative report based on a synthesized data from all test excavations (prepared in 1975); (4) an archival research focused on understanding the nature and extent of man's historic

disturbances of the site with particular emphasis on delineating portions of the site likely to be least disturbed and worthy of further archaeological work (undertaken in 1981 and 1982); and (5) a final research and salvage program to define the remaining remnants of archaeological midden which still existed on the subject site. This permit was to allow the applicant to do further testing in order to determine the nature of the relationship between the surface concentration of cogged stones (that had been long since collected) and the underlying midden deposit (that had been heavily disturbed). The permit dealt with two main areas within ORA-83: the plowed field and the area around the eucalyptus grove. It was determined that the greatest amount of cultural material (which consists mostly of shell) was located within the eucalyptus grove since the presence of trees discouraged grading and plowing over the years. The narrow strip of land directly adjacent and north of the trees and a small area east of the grove were determined to contain shallow deposits of basal midden.

The Commission imposed one special condition on permit 5-83-984. The Commission required that the Archaeological Research Design be modified to provide (1) clarification that preservation of all or part of the site may be appropriate depending on the results of the exploratory phase of the investigation; (2) clarification that the augering program was principally for delineating site boundaries; (3) definition of the term “disturbed” as used in the research design, and (4) provision for Executive Director review and approval of the work planned in subsequent tasks after Task 5 (Auger Program) and Task 7 (Hand Excavation Units – Initial series).

Prior to the issuance of this permit in 1984 the Research Design for the first phase of the project came under much scrutiny and opposition by the general public, several archaeologists and Native American groups as well.

5-83-702-A3¹²

The first coastal development permit for archaeological activity at ORA-85 the Eberhart Site, and ORA-289. The Signal landmark permit amendment for a testing and evaluation program for the two archaeological sites became effective on August 23, 1988, after no

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Coastal development permit application 5-83-702 and permit amendments 702-A and 702-A2 did not involve activity within any archaeological site. They were approved between September, 1983 and September, 1987 authorizing geotechnical trenching and soil borings to determine the location of faults and to gather other geotechnical information on the Bolsa Chica Mesa and the Lowlands. The original 1983 permit was granted to Signal Landmark and the Huntington Beach Company. The first permit amendment was granted to Signal Landmark and the permittee of the second amendment was Signal Landmark Inc. On behalf of Signal Bolsa Corporation.

objection was received of the Executive Director's determination that the permit amendment was consistent with the Coastal Act.

5-89-772

This coastal development permit application, granted to Signal landmark Inc. on December 14, 1989 approved Phase II of the Final Research and Salvage Program for ORA-83, the Cogged Stone Site. This work represented the second half of the last stage of the five step archaeological program for ORA-83 that began with the work approved under permit 5-83-984 in 1984. One key element of the program was to ensure that it contributed to the understanding of history or prehistory through a carefully thought out research design. By the time of this application, ORA-83 had been nominated for inclusion in the National Register of Historic Places and was recommended for this designation by the State Historic Resources Commission on November 4, 1982, based on the significance of the archaeological artifacts the site had produced.

The coastal development permit approved the excavation of 17 two-meter by two-meter hand units in six areas within the eucalyptus grove of the upper bench of the Bolsa Chica Mesa. However, if features or in-place cogged stones were found during the approved excavations, the excavation of additional intervening units would be allowed, if needed, in order to fully expose, document and remove those resources. The excavation of up to 12 additional units was authorized by the permit. The Commission imposed one special condition on the permit requiring the submittal of written evidence that the applicant had retained a County certified archaeologist to monitor the work approved by the permit and the submittal of evidence that a copy of the report on literature and records search and field survey for the site had been reviewed and approved by the Orange County manager of Harbors, Beaches and Parks. Further, the applicant was required to demonstrate that the proposed project had received review from the above designated County official, from members of the Pacific Coast Archaeological Society (PCAS), and from the Native American Groups (more particularly those who belong to the Juaneno and Gabrielino tribes).

In an attempt to avoid the controversy that surrounded permit 5-83-984, Commission staff met with representatives of the Juaneno and Gabrielino Indian tribal groups and the applicant's consulting archaeologist to determine who would represent both tribal groups in monitoring the proposed excavations. The applicant also published a notice in a local newspaper of general circulation of its application for a coastal permit for the proposed project.

5-89-772-A1

The first amendment to permit 5-89-772 was issued on March 8, 1991. The applicant requested an amendment to the special condition of the original permit requiring the review of the proposed archaeological testing and recovery plan by members of the Pacific Coast Archaeological Society (PCAS) because they had reached an impasse with the members of the group. The dispute was over the percentage and extent of ORA-83 that should be examined. The applicant proposed to excavate only 7 acres of the 11.9-acre site because it was the least disturbed. PCAS wanted 100% of ORA-83 to be sampled, including the plowed field area and suggested that it could be done using a fine-scale operation with heavy machinery, removing thin layers at a time, under archaeological supervision.

The Commission ultimately modified the special condition, not by removing PCAS, but by providing that any comments by PCAS be reviewed by a three member peer review team. Further, any conflicts between PCAS comments and the applicant's archaeologist's scope of work was to be resolved by the peer review team and by the State Office of Historic Preservation.

5-89-772-A2

This amendment request was to delete the requirement of review by the State Office of Historic Preservation (SOHP) from the special condition. The requirement for SOHP review had been added in 5-89-772-A1 to help mediate disputes between the applicant's archaeologist and the PCAS reviewers. The applicant requested this change because there was a delay in getting SOHP to review and comment on the project. Initially the Commission decided that review by SOHP should not be eliminated because the agency had continued to express a desire to do so. However, ultimately the State Office of Historic Preservation sent a letter stating that they would not be able to review and comment on the project due to staffing shortages. The Commission then approved the requested amendment.

Executive Director Report to the Commission

On February 28, 1994 the City of Huntington Beach requested that the Executive Director investigate and determine whether any of the Commission permits issued for testing and excavation within ORA-83 or the demolition of the adjacent World War II bunkers should remain in force or be rescinded. The Executive Director focused the investigation on whether there was any evidence that the permits were not in compliance with the terms and conditions of their approvals, and secondly, whether there was any merit to suspending any of the permits and processing a revocation request. The specific permits that were investigated were 5-89-772, as amended and 5-90-1143, a permit issued on September 27, 1991 for the demolition of the two World War II gun emplacements that were located adjacent to ORA-83.

The specific questions asked by the City to be investigated were: (1) was significant information concerning the presence of human remains on ORA-83 intentionally not disclosed; (2) why were the discovery of human remains not reported to the County

Coroner over a year after the discovery, in violation of the applicable law that they be reported within 24 hours of discovery, (3) was there an attempt to circumvent the system and its definition of proper handling of human remains, (4) had proper procedures (daily logs, preservation techniques, disposition of artifacts and timely reports) been followed in the work conducted at ORA-83, (5) should ORA-83 be designated a cemetery and remain intact, (6) the scientific integrity and cultural sensitivity of personnel performing work at ORA-83 and whether their work had been monitored by appropriate State agencies on a regular basis, (7) should the Archaeological Information Center at UCLA receive the extensive information that had been obtained from the site, (8) should the site be placed on the National Register of Historic Places as was previously recommended, and (9) should there be better legislation to protect archaeological sites like ORA-83.

The Executive Director's response to many of the above questions was that they were beyond the purview of the Coastal Commission and that some of the issues raised should be addressed by the Native American monitors and/or peer review team that were required by the permits to be consulted in decisions regarding certain aspects of the development. The Executive Director concluded that the applicant was in compliance with the terms and conditions of both permits and that there was no merit to the grounds for processing a revocation request.

R5-89-772

Although Commission staff held meetings between the applicant and the affected Native American groups and required the review of the proposed work by PCAS, the controversy surrounding ORA-83 did not end. On November 3, 1999 the Bolsa Chica Land Trust filed a request with the Commission to revoke the Phase II approval of the final research and data recovery program permit. The contentions raised in the revocation request were: that further archaeological work, not in the immediate vicinity of the eucalyptus grove, and therefore beyond the approved scope of work was occurring; that the permitted work has been completed in its entirety for over five years, that the permit is also ten years old and therefore should be revoked or suspended; that the work under the permit was not pursued with due diligence as required by the standard conditions of the permit; the additional scraping and clearing. The Commission denied the revocation request finding that it did not establish the grounds required to do so pursuant to Section 13105 of the Commissions' Regulations.

K. CONSISTENCY WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of coastal development permits to be supported by a finding showing the permit, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section

21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The proposed project has been conditioned to be found consistent with the biological resources, public access, water quality, and archaeology policies of the Coastal Act. The special conditions would require that 1) an open space restriction be placed on the habitat areas; 2) an offer to dedicate the proposed Coastal Sage Scrub and Native Grassland Creation habitat and Southern Tarplant and Seasonal Pond Environmental Protection Area be recorded; 3) a trail easement be offered over the public trail and over the portion of the grassland habitat area that will be subject to approved fuel modification; 4) a public access and habitat management program be developed and funding be identified to carry out these activities; 5) the applicant abide by the California Burrowing Owl Consortium guidelines for avoiding and mitigating impacts to burrowing owls during construction; 6) the CC&R's of the subdivision reflect certain requirements, primarily dealing with public access and habitat protection conditions; 7) construction and development phasing be carried out in a manner that is protective of the biological resources and assures that the public access and recreation are prioritized; 8) erosion control measures are in place to prevent impacts to the marine environment; 9) the fencing off of habitat areas and the identification of construction staging areas that will not adversely impact sensitive resources; 10) the preparation of a final habitat management plan with appropriately sized, planted and managed ESHA buffers, controls activities within those buffers, and the addition of the Southern Tarplant and Seasonal Pond Environmental Protection Area into the Plan; 11) native and non-native, non-invasive appropriate landscaping throughout the project area; 12) fuel modification within the ESHA buffer areas be regulated; 13) lighting be directed away from habitat buffer areas; 14) certain requirements relating to walls, fences, gates, safety devices and other habitat barriers be followed; 15) all subdivision streets, sidewalks, parking and trails and parks be open to the general public; 16) additional requirements on the proposed water quality management plan be observed; 17) a revised tentative tract map eliminating the proposed residual parcel on the lower bench, and revised plans showing the enlargement of the Eucalyptus Tree and Burrowing Owl ESHA buffers, public access signage and cultural resources interpretive plan along the habitat trail, revised stormdrain plan, and off-site raptor foraging habitat plans be submitted; 18) additional slope stability analysis for the revised grading plan be performed and the developer conform development plans to geotechnical recommendations; 19) the developer assume the risks of development; 20) the developer treat the exterior appearance of structures visible from the public areas; 21) the height of the structures abutting and visible from the public trails be kept to no more than 31.5 feet, as proposed; 22) procedures for the review and approval of future development be followed; 23) requirements and procedures established herein to be followed regarding the possible discovery of additional archaeological resources during grading; 24) the reports required to be prepared in conjunction with the research, investigation and salvage of ORA-83 and curation of the artifacts recovered from the archaeological site be disseminated; 25) the applicant obtain all other necessary agency approvals; 26) the applicant perform work in

strict compliance with all of the special conditions of this permit and 27) applicant be informed of the Commission staff's right to inspect the site.